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- Adam, J.C., and D. P. Lettenmaier, 2008: Application of new precipitation and reconstructed streamflow products to streamflow trend attribution in northern Eurasia. *J. Clim.*, **21**, 1807-1828.
- Aizen, V.B., P.A. Mayewski, E.M. Aizen, D.R. Joswiak, S. Kaspari, S. Sneed, A.B. Surazakov, B. Grigholm, A. Finaev. 2008. Stable-Isotope and Chemical Time Series from Fedchenko Glacier Firn Core (Pamir). *J. of Glaciology* (in press)
- Akhmadiyeva, Zh.K, and P.Ya. Groisman, 2008: General estimate of climatic change in Kazakhstan after 1990. *Hydrometeorology and Ecology*, 2008, No. 2, 46-54 (in Russian)
- Andreev AA, Grosse G, Schirrmeister L, Kuznetsova TV, Kuzmina SA, Bobrov AA, Tarasov PE, Novenko EYu, Meyer H, Derevyagin AYU, Kienast F, Bryantseva A, and Kunitsky VV, 2008: Weichselian and Holocene palaeoenvironmental history of the Bol'shoy Lyakhovsky Island, New Siberian Archipelago, Arctic Siberia. *Boreas*. doi:10.1111/j.1502-3885.2008.00039.x
- Anisimov, O.A., Vandenberghe, J., Lobanov, V.A., Kondratiev, A.N., 2008: Predicting changes in alluvial channel patterns in North-European Russia under conditions of global warming. *Geomorphology*, **98**, 262-274.
- BACC authors' team, 2008: Assessment of Climate Change for the Baltic Sea Basin. Series: [Regional Climate Studies](#), XXII, 474 pp. ISBN: 978-3-540-72785-9.
- Bergen, K., Zhao, T., Kharuk, V., Blam, Y., Brown, D. Peterson, L., Miller, N. 2008. Changing Regimes: Forested Land-Cover Dynamics in Central Siberia 1974-2001, Special Issue on Mapping & Modeling Land Use/Land Cover Dynamics in Frontiers Settings, *Photogrammetric Engineering & Remote Sensing*, **74**:787-798.
- Bhatt, U. S., D. A. Walker, M. K. Reynolds, J. Comiso, and H. E. Epstein. 2009: Panarctic trend and variability in the land-ocean margins of sea-ice concentrations, land-surface temperatures, and tundra vegetation greenness. *Earth Interactions* (in review).
- Bhatt, U. S., D. A. Walker, M. K. Reynolds, J. Comiso, and H. E. Epstein. 2009: Role of atmospheric processes in trends and variability of sea-ice, land-surface temperatures, and tundra vegetation greenness in Alaska. *Atmospheric Research*. (in review)
- Boettger T., Haupt M., Weise S., Junge F.W., Velichko A.A., Novenko E.Yu., Borisova O.K., 2008: Climate signals in stable isotope ratios of European tree rings and lake sediments. In: Man and environment in boreal forest zone: past, present and future. International Conference, July 24-29, 2008. Central Forest State Natural Biosphere Reserve, Russia. E.Yu. Novenko, I.I. Spasskaya, A.V. Olchev (eds.). Moscow: Inst. Geogr. RAS & Inst. Ecol. Evolution RAS, 2008. P. 24-25.
- Bogdanova, E.G. and S.Yu. Gavrilova, 2008: Correction of the Precipitation Time Series Nonhomogeneity Caused by Replacement of the Nipher Shielded Rain Gauge by a Tretyakov Precipitation Gauge. *Russian Meteorology and Hydrology*, **33**, No. 8, pp. 525-536. (in Russian in *Meteorologiya i Gidrologiya*, 2008, No. 8, pp. 87-102).
- Bogdanova, E.G., S.Yu. Gavrilova, and B.M. Iljin, 2009: Changes in the number of days with strong precipitation over the territory of Russia. *Russian Meteorology and Hydrology*, in press (in Russian: *Meteorologiya i Gidrologiya*).
- Bogdanova, E.G., S.Yu. Gavrilova, and B.M. Iljin, 2009: Temporal changes of bias-corrected precipitation over the territory of Russia for the 1936-2000 period. *Russian Meteorology and Hydrology*, in press (in Russian: *Meteorologiya i Gidrologiya*).
- Bowling, L.C., K.A. Cherkauer and J.C. Adam, 2008: Current capabilities in regional scale simulations of surface water dynamics in regions of continuous permafrost, In: *Ninth International Conference on Permafrost*, Kane DL & Hinkel KM (eds), Institute of Northern Engineering, University of Alaska Fairbanks, 1, pp. 177-182.
- Brown, J. and V. E. Romanovsky, 2008: Report from the International Permafrost Association: State of Permafrost in the First Decade of the 21st Century,

- Permafrost and Periglacial Processes*, 19, 255-260.
- Brown, J. and V. E. Romanovsky, 2008: Report from the International Permafrost Association: State of Permafrost in the First Decade of the 21st Century, *Permafrost and Periglacial Processes*, 19, 255-260.
- Buldovich, S., Romanovskiy, N., Tipenko, G., Sergeev, D., and V. Romanovsky, 2008: Permafrost Dynamics Within an Upper Lena River Tributary: Modeled Impact of Infiltration on the Temperature Field Under a Plateau, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 1, pp. 211-214.
- Buriak L.V., and Ponomarev E.I., 2009: Monitoring of disturbance territory using DMCII satellite data. *J. Geography and Natural Resources* (in review).
- Chanton, J.P. and K.M. Walter, 2008: Siberian Permafrost Decomposition, Arctic Lakes and Carbon. Development and Transition. Published by the United Nations Development Programme and the London School of Economics and Political Science, (June, 2008 issue), www.developmentandtransition.net
- Chen, J. Challenges to modern ecologists. In Y. Wu (ed), *Ecological Complexity and Ecological Vision*. China Science Press (in press)
- Chen, S., J. Chen, G. Lin, W. Zhang,, H. Miao, L. Wei, J. Huang, X. Han. Energy balance and partition in Inner Mongolia steppe ecosystems with different land use types. *Agricultural and Forest Meteorology* (in press)
- Christensen J.P., Shimada K., Semiletov I.P. and P. A. Wheeler, 2008: Chlorophyll Response to Shelf-Break Upwelling and Winds in the Chukchi Sea, Alaska, in Autumn. *The Open Oceanography Journal*, 2, 34-53
- Christensen, J.H., M. Stendel, P. Kuhry, V. Romanovsky, and J. Walsh, 2008: Does Permafrost Deserve Attention in Comprehensive Climate Models, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 1, pp. 247-250.
- Ciganda, V., A.A. Gitelson, and J. Schepers, 2008: Vertical Profile and Temporal Variation of Chlorophyll in Maize Canopy: Quantitative "Crop Vigor" Indicator by Means of Reflectance-Based Techniques, *Agron. J.*, 100, 1409-1417. doi:10.2134/agronj2007.0322
- Ciganda, V., A.A. Gitelson, and J. Schepers, 2009: Non-destructive determination of maize leaf and canopy chlorophyll content. *Journal of Plant Physiology*, 166, 157-167.
- Comiso, J. C. and F. Nishio, 2008: Trends in the sea ice cover using enhanced and compatible AMSR-E, SSM/I, and SMMR data, *J. Geophys. Res.*, 113, C02S07, doi:10.1029/2007JC004257.
- Comiso, J.C., C.L. Parkinson, R. Gersten, and L. Stock, 2008: Accelerated decline in the Arctic sea ice cover, *Geophys. Res. Lett.* 35, L01703, doi:10.1029/2007GL031972.
- Crout, N., T. Kokkonen, A.J. Jakeman, J.P. Norton, R. Anderson, H. Assaf, B.W.F. Croke, N. Gaber, J. Gibbons, D. Holzworth, J. Mysiak, J. Reichl, R. Seppelt, T. Wagener, P.H. Whitfield. 2009. Chapter 2: Good Modelling Practice. In: Jakeman, A.J., Voinov, A.A., Rizzoli, A.E. and Chen, S.H. (eds) *Environmental Modelling, Software and Decision Support 3*, 15-31 (in press).
- Daanen, R. P., Misra, D., Epstein H., Walker, D. A. and V. E. Romanovsky, 2008: Simulating Non-Sorted Circle Development in Arctic Tundra Ecosystems, *J. Geophys. Res.*, 113, G03S06, doi:10.1029/2008JG000682.
- Daanen, R., V. Romanovsky, D. Walker, and M. LaDouceur, 2008: High-Resolution Surface and Subsurface Survey of a Non-Sorted Circle System, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 1, pp. 321-326.
- Darmenova, K., I. N. Sokolik, Y. Shao, B. Marticorena, and G. Bergametti, 2009: Development of a physically-based dust emission module within the Weather Research and Forecasting (WRF) model: Assessment of dust emission parameterizations and input parameters for source regions in Central and East Asia, *J. Geophys. Res.*, 114, D14201, doi:10.1029/2008JD011236.
- de Beurs, K.M., and G.M. Henebry. 2008. Northern annular mode effects on the land surface phenologies of Northern Eurasia. *J. Climate*, 21, 4257-4279
- de Beurs, K.M., and G.M. Henebry. 2008: War, drought, and phenology: Changes in the land surface phenology of Afghanistan since 1982. *Journal of Land Use Science*, 3 (2-3), 95-111.
- Elmquist M., I. Semiletov, L. Guo and Ö. Gustafsson. 2008: Pan-Arctic patterns in black carbon sources and fluvial discharges deduced from radiocarbon and PAH source apportionment markers in estuarine surface sediments, *Global Biogeochemical Cycles*, 22, GB2018, doi:10.1029/2007GB002994.
- Epstein, H. E., D. A. Walker, M. K. Reynolds, G. J. Jia, and A. M. Kelley, 2008: Phytomass patterns across a temperature gradient of the North American arctic tundra. *Journal of Geophysical Research – Biogeosciences*, 113, G03S02 (p01-p11).

- Epstein, H.E., J.O. Kaplan, H. Lischke, and Q. Yu. 2008: Simulating future changes in arctic and sub-arctic vegetation. *Climate Dynamics* in press.
- Feret, J.-B., François, C., Asner, G. P., Gitelson A.A., Martin, R.E., Bidet, L.P.R., Ustin, S.L., le Maire, G., and S. Jacquemoud, 2008: PROSPECT-4 and 5: Advances in the Leaf Optical Properties Model Separating Photosynthetic Pigments, *Remote Sensing of Environment*, 112, 3030-3043, doi:10.1016/j.rse.2008.02.012.
- Forbes, B.C., 2008: Equity, vulnerability and resilience in social-ecological systems: a contemporary example from the Russian Arctic. *Research in Social Problems and Public Policy*, 15, 203-236.
- Fyodorov-Davydov D.G., Kholodov A.L., Ostroumov V.E., Kraev G.N., Sorokovikov V.A., Davudov S.P., and Merekalova A.A. 2008: Seasonal Thaw of Soils in the North Yakutian Ecosystems. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 1, 481-486.
- Georgiadi A.G., Koronkevich N.I., Milyukova I.P., Barabanova E.A., Kislov A.V. 2009: Integrated Scenarios of Long-Term River Runoff Changes within Large River Basins in the XXI Century. *Proc. of IHP International Symposium "The role of hydrology in water resources management"*, October 14-16, 2008, Capri, Italy (in press)
- Georgiadi A.G., Milyukova I.P., 2008: Features of river runoff changes in Volga river basin during warm epochs in the past and at projected global climate warming. *Proc. of VI All Russian Hydrological Congress, September 20-October 1, 2004*, Saint-Petersburg, section 3, part 2, *Meteoagentstvo Rosgidrometa*, M., 191-198 (in Russian)
- Georgiadi A.G., Milyukova I.P., 2009: Sensitivity of river runoff to global climate warming in a large permafrost dominated catchment. *Hydrological processes* (in press).
- Georgiadi A.G., Milyukova I.P., Kashutina E.A., 2008: Recent and Projected River Runoff Changes in Permafrost Regions of Eastern Siberia (Lena River Basin). In: Kane, D.L. & Hinkel, K.M. (eds). *Ninth International Conference on Permafrost*. Institute of Northern Engineering, University of Alaska Fairbanks, 1, 511-515
- Georgiadi A.G., Milyukova I.P., Kashutina E.A., 2009: Response of River Runoff in Cryolithic Zone of Eastern Siberia (Lena River Basin) to Future Climate warming. In: *Environmental Change in Siberia*, Springer (in press).
- Gitelson, A.A. G. Dall'Olmo, W. Moses, D.C. Rundquist, T. Barrow, T.R. Fisher, D. Gurlin, and J. Holz, 2008: A simple semi-analytical model for remote estimation of chlorophyll-a in turbid waters: Validation. *Remote Sensing of Environment*, 112, 3582–3593, doi:10.1016/j.rse.2008.04.015
- Gitelson, A.A., Viña, A., Masek J.G., Verma, S. B., and A. E. Suyker, 2008: Synoptic Monitoring of Gross Primary Productivity of Maize Using Landsat Data, *IEEE Geoscience and Remote Sensing Letters*, 5(2), April 2008, 10.1109/LGRS.2008.915598.
- Goetz, S.J., H.E. Epstein, F. Achard, D. Alcaraz, U. Bhatt, A. Bunn, J. Comiso, M. Hansen, G.J. Jia, J.O. Kaplan, H. Lischke, A. Lloyd, D.A. Walker, and Q. Yu. 2009: Vegetation productivity and disturbance changes across arctic northern Eurasia: Satellite observations and simulation modeling. In: Gutman, G. (ed.) *Eurasian Arctic Land Cover and Land Use in a Changing Climate* (in press).
- Govorkova, V.A., V.M.Kattsov, V.P.Meleshko, T.V.Pavlova, I.M. Shkol'nik 2008: Climate of Russia in the 21st Century. Part 2. Verification of atmosphere-ocean general circulation models CMIP3 for projections of future climate changes. *Russian Meteorol. Hydrol.*, No. 10, 467-477. DOI: 10.3103/S1068373908080013 (in English; in Russian: in *Meteorologiya i Gidrologiya*, 2008, No. 8, pp. 5–19).
- Groisman P.Ya. and S.V. Ivanov (eds.) 2009: *Regional Aspects of Climate-Terrestrial-Hydrologic Interactions in Non-boreal Eastern Europe*. Springer, Amsterdam, The Netherlands, 251 pp.
- Groisman, P.Ya. and A. Reissell (eds.) 2009: Proceedings of the Northern Eurasia Earth Science Partnership Initiative (NEESPI) Regional Science Team Meeting devoted to the High Latitudes, 2-6 June, Helsinki, Finland. iLEAPS Science Report Series No 1, University of Helsinki Press, Helsinki, Finland ~ 100 pp.[Available also at <http://www.iLEAPS.org>].
- Groisman, P.Ya., and 27 Co-Authors, 2009: The Northern Eurasia Earth Science Partnership: An Example of Science Applied To Societal Needs. *Bull. Amer. Meteorol. Soc.*, 90, 671-688.
- Groisman, P.Ya., S. Ivanov, G. Gutman, C. Simmer, 2009: Regional aspects of climate-terrestrial-hydrologic interactions in nonboreal Eastern Europe: A Summary of the Northern Eurasia Earth Science Partnership Initiative (NEESPI) Workshop held in Odessa, Ukraine, 23-28 August 2008". *Eos Trans. Amer.Geophys.Union*, 90(8), 63.
- Grosse G and Lantuit H, 2008: PYRN-Bib 3.2: The Permafrost Young Researchers Network Bibliography of Permafrost-Related Theses. Permafrost Young Researchers Network, 72 pp. (Permanent handle: <http://hdl.handle.net/10013/epic.31101>)

- Grosse G, Romanovsky V, Walter K, Morgenstern A, Lantuit H, and Zimov S, 2008: Distribution of Thermokarst Lakes and Ponds at Three Yedoma Sites in Siberia. In: *Ninth International Conference on Permafrost*, Kane DL & Hinkel KM (eds), Institute of Northern Engineering, University of Alaska Fairbanks, 1, pp. 551-556.
- Gutman, G. and A. Reissell (eds.) 2009: *Arctic land cover and land use in a changing climate: Focus on Eurasia*. Springer, Amsterdam, The Netherlands (in press).
- Hamilton, A.S., and P.H. Whitfield. 2008. Invited Commentary: Coupling science and monitoring to meet growing information needs. *Canadian Water Resources Journal*. 33 (1), 1-3.
- Hatfield, J.L., Gitelson, A.A., Schepers, J. S., and C.L. Walthall, 2008: Application of Spectral Remote Sensing for Agronomic Decisions, *Agron. J.*, 100, 117–131. doi:10.2134/agronj2006.0370c.
- Hinkle, K.M., Klene, A.E., and Nelson F.E., 2008: Spatial Variability of Winter N-factors near Barrow, Alaska. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 1, 705-709
- Houghton, R.A., and Goetz, S.J., 2008: *New satellites help quantify carbon sources and sinks*. *Eos Transactions AGU*, 89, 537-556.
- Huang, D., Knyazikhin, Y., Wang, W., Deering, D.W., Stenberg, P., Shabanov, N., Tan, B. and Myneni, Ranga B., 2008: Stochastic transport theory for investigating the three-dimensional canopy structure from space measurement. *Remote Sensing of Environment*, 112, 35-50.
- Huang, J. P., W. Zhang, J. Q. Zuo, J. R. Bi, J. S. Shi, X. Wang, Z. L. Chang, Z. W. Huang, S. Yang, B. D. Zhang, G. Y. Wang, G. H. Feng, J. Y. Yuan, L. Zhang, H. C. Zuo, S. G. Wang, C. B. Fu, and J. F. Chou, 2008: An overview of the semi-arid climate and environment research observatory over the Loess Plateau. *Adv. Atmos. Sci.*, 25(6), 906–921, doi: 10.1007/s00376-008-0906-7.
- Jia, G.J., H.E. Epstein and D.A. Walker. 2009: Vegetation greening in the Canadian Arctic related to warming. *Journal of Geophysical Research - Biogeosciences* (in press).
- John, R., J. Chen and Co-Authors, 2008: Predicting plant diversity based on remote sensing products in the semi-arid region of Inner Mongolia. *Remote Sensing of Environment*, 112, 2018–2032 .
- Kharuk, V.I., K.J. Ranson, S.T. Im, and M.L. Dvinskaya, 2009: Response of *Pinus sibirica* and *Larix sibirica* to climate change in southern Siberian alpine forest-tundra ecotone. *Scand. J. Forest Res.*, 24, 130-139.
- Klene A.E., Nelson F.E., Shiklomanov N.I., Streletskiy D.A., 2008: Interannual Variability of Winter N0factirs in the Kuparuk River Basin. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 1, 953-958.
- Knorn, J., A. Janz, V. C. Radeloff, T. Kuemmerle, J. Kozak, and P. Hostert, 2009: Land cover mapping of large areas using support vector machines for a chain classification of neighboring Landsat satellite images. *Remote Sensing of Environment*, in press.
- Koronkevich N.I., Georgiadi A.G., Milyukova I.P., Barabanova E.A. 2008: Development of scenario forecasts of water resources state (Lena river basin example). In: "*Strategic problems of water use in Russia*", Russian Academy of Sciences, M., 351-360 (in Russian)
- Kosykh N.P., Mironycheva-Tokareva N.P., Peregon A.M., and E.K. Parshina, 2008: Biological productivity of bogs in the middle Taiga subzone of Western Siberia, *Russian Journal of Ecology*, 39, 7, 8-16, doi:10.1134/S1067413608070023.
- Krankina, O.N., R.A. Houghton, M.E. Harmon, E.H. Hogg, D. Butman, M. Yatskov, M. Huso, R.F. Treyfeld, V.N. Razuvaev, G. Spycher. 2008: Effects of Climate and Disturbance on Forest Biomass across Russia. *Can. J. Forest Res.*, 35, 2281-2293.
- Kuemmerle, T., Damm, A. and Hostert, P., 2008: A method to detect and correct single-band missing pixels in Landsat TM and ETM+ data. *Computers and Geosciences*, 34, 445-455.
- Kuemmerle, T., Hostert, P., Radeloff, V.C., Perzanowski, K, and Kruhlov, I., 2008: Post-socialist farmland abandonment in the Carpathians. *Ecosystems*, 11, 614-628.
- Kuemmerle, T., Hostert, P., St-Louis, V., and Radeloff, V.C., 2009: Using image texture to map field size in Eastern Europe. *J. of Land Use Science*, 4, 85-107.
- Kuemmerle, T., Kozak, J., Radeloff, V.C., and Hostert, P., 2009: Differences in forest disturbance rates among land ownership types in Poland during and after socialism. *J. of Land Use Science*, 4, 73-84.
- Kuemmerle, T., Müller, M., Rusu, M., and Griffiths, P., 2009: Land use change in southern Romania after the collapse of socialism. *Regional Environmental Change*, in press.
- Kukkonen, J., Sokhi, R., Luhanab. L., Harkonen, J., Salmi, T., Sofiev, M., and Karppinen, A., 2008: Evaluation and application of a statistical model for assessment of long-range transported proportion of PM2.5 in the United Kingdom and in Finland. *Atmosph. Environ.*, 42, 3980-3991. Doi:10.1016/j.atmosenv.2007.02.036.

- Kurbatova, J. C. Li, A. Varlagin, X. Xiao and N.N. Vygodskaya, 2008: Modeling Carbon Dynamics in Two Adjacent Spruce Forests with Different Soil Conditions in Russia. *Biogeosciences* 5, 969-980.
- Kurchatova A.N. and Boytsov A.V., 2008: Temperatures of Upper Permafrost in Northern West Siberia. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1659-1664.
- Lapenis, A. G., G. B. Lawrence, S. Baily, B. Aparin, A. Shiklomanov, N. Speranskaya, M. S. Torn, and M. Calef, 2008: Climatically Driven Loss of Calcium in Steppe Soil As a Sink for Atmospheric Carbon, *Global Biogeochem. Cycles*, 22, GB2010; doi:10.1029/2007GB003077.
- Lawrence, D. M., Slater A. G., Romanovsky V. E., and D. J. Nicosky, 2008: The sensitivity of a model projection of near-surface permafrost degradation to soil column depth and representation of soil organic matter, *Journal of Geophysical Research - Earth Surface*, 113, F02011, doi:10.1029/2007JF000883.
- Leibman, M.O., Epstein, H.E., Khomutov, A.V., Moskalenko N.G., Walker D.A., 2008: Relation of active layer depth to vegetation on the central Yamal Peninsula, Russia. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 1, 1037-1042.
- Leidig, M., J. Bonner, R. Hansen, V. Romanovsky, S. Brown, R. Martin, and J. Lewkowicz, 2009: Possible effects of frozen rock on explosive coupling, *The 27th Seismic Research Review - Ground-Based Nuclear Explosion Monitoring*, in press.
- Liu, J, Y. Qi, H. Shi, D. Zhuang, Y. Hu, 2008: Estimation of wind erosion rates by using ¹³⁷Cs tracing technique: A case study in Tariat-Xilingol Transect, Mongolia Plateau. *Chinese Sciences Bulletin*, 53(5), 751-758. (SCI)
- Lioubimtseva, E. and G.M. Henebry, 2009: Climate and environmental change in arid Central Asia: Impacts, vulnerability, and adaptations. *J. Arid Environ.*, 73, 963-977.
- Loboda, T. 2009: Modeling Fire Danger in Data-Poor Regions: A case study from the Russian Far East. *International Journal of Wildland Fire (in press)*
- Loboda, T.V., Csiszar, I.A., Justice, C.O., 2009: The impact of future climate change on fire danger in the Russian Far East. *Global and Planetary Change* (in review).
- Loveland, T.R., M.A. Cochrane, and G.M. Henebry. 2008: Landsat still contributing to environmental research. *Trends in Ecology and Evolution*, 23(4), 182-183
- Macdonald R.W., Anderson L.G., Christensen J.P., Miller L.A., Semiletov I.P., and R. Stein, 2008: The Arctic Ocean: budgets and fluxes, Chapter to be published in "Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis," Edited by K.-K. Liu, L. Atkinson, R. Quinones, L. Talaue-McManus, Springer-Verlag, in press.
- Manninen T. and P. Stenberg, 2009: Simulation of the effect of snow covered forest floor on the total forest albedo, *Agricultural and Forest Meteorology*, 149, No.2, 303-319.
- Marchenko S., Ablyazina D.A., and Arnold F., 2008: Development of Polygon Relief in the Central Part of Tazovskiy peninsula. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1131-1136.
- Marchenko, S., V. Romanovsky, and G. Tipenko, 2008: Numerical Modeling of Spatial Permafrost Dynamics in Alaska, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 2, pp. 1125-1130.
- Marchenko, S., 2008: Climate Change and its Impact on the Frozen Tombs of the Altai Mountains, pp. 61-63. UNESCO Project Preservation of Frozen Tombs of the Altai Mountains, Chapter 2, In: Preservation of the Frozen Tombs of the Altai Mountains. UNESCO. 80 pp.
- Marchenko, S., Sharkhuu, N., Li, X., Ishikawa, M., Brown, J., Romanovsky, V., and Drodzov, D., 2008: Toward a Permafrost Map of Central Asia. *Ninth International Conference on Permafrost*, University of Alaska Fairbanks, June 29 - July 3, 2008. Extended Abstracts, pp. 203-204.
- Mazhitova G., Malkova G., Chestnykh O., Zamolodchikov D., 2008: Recent decade thaw depth dynamics in the European Russian Arctic based on the Circumpolar Active Layer Monitoring (CALM) data. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1155-1160.
- Mazhitova G.G., 2008: Soil temperature regimes in the discontinuous permafrost zone in the East European Russian Arctic. *Eurasian Soil Science* 41, No. 1, 48-62.
- Meleshko, V.P., V.M. Kattsov, V.A. Govorkova, P.V. Sporyshev, I.M. Shkolnik, B.Ye. Shneerov, 2008: Climate of Russia in the 21st century. Pt.3: Projecting future climate changes over the territory of Russia by an ensemble of CMIP3 atmosphere-ocean general circulation models. *Meteor. Gidrologia (Russian Meteorology and Hydrology)*, 2008, No.9, 5-21.
- Meleshko, V.P., V.M. Kattsov, V.M. Mirvis, V.A. Govorkova, T.V. Pavlova, 2008: Climate of Russia

- in the 21st century. Pt.1: New evidences of anthropogenic effect on climate and new opportunities for its changes evaluation over the territory of Russia. *Meteor. Gidrologia (Russian Meteorology and Hydrology)*, 2008, No.6, 5-19.
- Melillo, J. F.S., R. Corell, K.M. Walter, Chapin, III, D. McGuire, 2008: Emerging Challenges. Methane from the Arctic: Global warming wildcard. United Nations Environmental Program, An overview of our changing environment, UNEP Year Book 2008, Editor Paul Harrison, Division of Early Warning and Assessment (DEWA), Nairobi, Kenya. ... pp
- Melillo, J.M., S. Hassol, D. Archer, T. Callaghan, F.S. Chapin III, T. Christensen, A.D. McGuire, K. Walter, and Q. Zhuang, 2008: Methane from the Arctic: Global warming wildcard. *Chapter in United Nations Environmental Programme Yearbook*, 2008. Editor Paul Harrison, Division of Early Warning and Assessment (DEWA), Nairobi, Kenya. ... pp
- Miao, H, S. Chen, J. Chen, W. Zhang, P.Zhang, L. Wei, G. Lin. Effects of land-use change on evapotranspiration of semi-arid steppes in Inner Mongolia, China. *Agricultural and Forest Meteorology (in press)*
- Mikhailov A.Yu., Rubinstein K.G., Shmakin A.B., 2008: Testing the method of detailization of surface air temperature based on modeling complex of atmospheric boundary layer and heat/water balance on land. *Russian Meteorology and Hydrology*, No. 1, pp. 15-23.
- Monserud RA, Huang S, Yang Y, and Tchebakova NM, 2008: Change in lodgepole pine site index using climatic change scenarios in Alberta. *Canadian J. Forest Research*. 38,:343-352.
- Morgenstern A, Grosse G, and Schirrmeister L, 2008: Genetical, Morphological, and Statistical Characterization of Lakes in the Permafrost-Dominated Lena Delta. In: Kane DL & Hinkel KM (eds), *Ninth International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska Fairbanks, 2, pp. 1239-1244.
- Morozova, T.D., A.A.Velichko. Paleosols, 2008: Quaternary. In: Encyclopedia of Paleoclimatology and Ancient Environments. Ed. Vivien Gornits. Springer, 752-757
- Moskalenko N.G., 2008: Vegetation and Permafrost Changes in West Siberia Northern Taiga. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1245-1250.
- Möttus, M. and Stenberg, P., 2008: A simple parameterization of canopy reflectance using photon recollision probability. *Remote Sensing of Environment*, 112, 1545-1551.
- Müller, M., Kuemmerle, T., Rusu, M., and Griffiths, P. 2009: Lost in transition. Determinants of cropland abandonment in postsocialist Romania. *Journal of Land Use Science*, 4, No.1, 109-128.
- Nadyozhina, E.D., I.M. Shkolnik, T.V. Pavlova, E.K. Molkentin, and A.A. Semioshina, 2008: Permafrost response to the climate warming as simulated by the regional climatic model of the Main Geophysical Observatory. *Earth Cryosphere*, 12, No. 2, 3-11.
- Nelson, F., N.I. Shiklomanov, D.A. Streletskiy, V.E. Romanovsky, K. Yoshikawa, K.M. Hinkel, and J. Brown, A Permafrost Observatory at Barrow, Alaska: Long-Term Observations of Active-Layer Thickness and Permafrost Temperature, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 2, pp. 1267-1272.
- Nelson, F.E., Shiklomanov, N.I., Hinkel, K.M., and Brown, J., 2008: Decadal results from the Circumpolar Active Layer Monitoring (CALM) program. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1273-1280.
- Nicolosky, D. J., Romanovsky, V. E. and G. G. Panteleev, 2009: Estimation of soil thermal properties using in-situ temperature measurements in the active layer and permafrost, *Cold Regions Science and Technology*, 55, pp. 120-129, DOI information: 10.1016/j.coldregions.2008.03.003, 2009.
- Nicolosky, D. J., Romanovsky, V.E., Tipenko, G. S., and D. A. Walker, 2008: Biogeophysical interactions in nonsorted circles in the Low Arctic, *J. Geophys. Res.*, 113, G03S05, doi:10.1029/2007JG000565.
- O'Donnell, J. A., Romanovsky, V. A., Harden, J. W., Yoshikawa, K., and A. D. McGuire, 2008: The effect of soil moisture and ice content on the thermal conductivity of organic soil horizons underlain by discontinuous permafrost, Extended Abstract, *Ninth International Conference on Permafrost*, June 29-July 3, Fairbanks, Alaska, 1, pp. 227-228.
- Olchev A., Kurbatova J., Tatarinov F., Molchanov A., Varlagin A., Gorshkova I., Vygodskaya N. 2009: Estimation of Gross Primary (GPP) and Net Primary (NPP) Productivity of forest ecosystems of central part of European Russia using field measurements and mathematical model. (in Russian). *J. Successes of Modern Biology (in press)*.
- Olchev A., Kurbatova J., Varlagin A., Vygodskaya N.N., 2008: Modelling approach for description of

- CO₂ exchange between forest ecosystem and the atmosphere. (in Russian) *J. Lesovedenie*, 3, 3-13
- Olchev A., Radler K., Sogachev A., Panferov O., Gravenhorst G., 2009: Application of a three-dimensional model for assessing effects of small clear-cuttings on radiation and soil temperature. *J. Ecological Modelling* (in press).
- Parfenova EI and Tchebakova NM., 2008: Modeling of fire hazard in Siberian forests under climate change. In: Climate change and forest ecosystems. Proc. Intern. Conf. Vilnius, Lithuania October 22-23. 2008. LUTUTE Publ. Company, Kaunas. 122-125.
- Parfenova, E.I. and Thebakova NM, 2009: Bioclimatic models of montane forests in Siberia. *Russian J. of Forest Sciences*. (in press)
- Parson M.A., Smith S., Romanovsky V.E., Shiklomanov N.I., Christiansen H.C., Overuin P., Zhang T., Balks M., Brown J. 2008 Managing Permafrost Data: Past Approaches and Future Directions. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2: 1369-1374.
- Parsons, M.A., S.L. Smith, V.E. Romanovsky, N.I. Shiklomanov, H.H. Christiansen, P.P. Overduin, T. Zhang, M.R. Balks, and J. Brown, Managing Permafrost Data: Past Approaches and Future Directions, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 2, pp. 1369-1374.
- Peregon A., M. Uchida, Y. Shibata, and Y. Yamagata, 2009: Peat accumulation rate and lateral extension in *Sphagnum* bogs along the southern margin of the boreal region, western Siberia, *Global Change Biology*, (in review).
- Peregon, A., S. Maksyutov, N. Kosykh, N. Mironysheva-Tokareva, 2008: Map based inventory of the wetland biomass and net primary production in western Siberia, *J. Geophys. Res.*, 113, G01007, doi:10.1029/2007JG000441.
- Ping, C.-L., G. J. Michaelson, M. T. Jorgenson, J. M. Kimble, H. Epstein, V. E. Romanovsky, and D. A. Walker, 2008: High stocks of soil organic carbon in North American Arctic region, *Nature Geoscience*, doi:10.1038/ngeo284, 2008.
- Pipko, I.I., Repina I.A., Salyuk A.N., Semiletov I.P., and S.P. Pugach, 2008: Comparison of Calculated and Measured CO₂ Fluxes between the Ocean and Atmosphere in the Southwestern Part of the East Siberia Sea. *Transactions of Russian Academy of Sciences*, 422 (7), 1105-1108 (in Russian; translated in English by Springer).
- Pipko, I.I., Semiletov I.P., Tischenko P.Ya., Pugach S.P., and N.I. Savelieva, 2008. Carbon System Parameters Variability in the East-Siberian Sea Coastal-Shelf one during the Autumn Season. *Okeanologiya (Oceanography)*, 48 (1), 59-72 (translated in English)
- Ponomareva O. and Y. Shur, 2008: Results of long-term monitoring of cryogenic processes in the northern taiga of West Siberia. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1439-1444
- Porcelli D., Andersson P., Baskaran M., Frank M., Björk G., and I. Semiletov, 2009. The distribution of neodymium isotopes in Arctic Ocean basins. *Geochimica et Cosmochimica Acta*, (in press).
- Prokushkin A. S., Tokareva I.V., Prokushkin S.G., Abaimov A.P., Guggenberger G., 2008: Fluxes of Dissolved Organic Matter in Larch Forests in the Cryolithozone of Central Siberia. *Rus. J. Ecol.*, 39(3), 151–159.
- Raynolds, M. K., and D. A. Walker, 2008: The effects of deglaciation on circumpolar distribution of arctic vegetation. *Remote Sensing of Environment* (in press.).
- Raynolds, M. K., J. C. Comiso, D. A. Walker, and D. Verbyla. 2008: Relationship between satellite-derived land surface temperatures, arctic vegetation types, and NDVI. *Remote Sensing of the Environment*, 112, 1884-1894.
- Raynolds, M.K and D.A. Walker. 2008: Circumpolar relationships between permafrost characteristics, NDVI and arctic vegetation types. In: Kane, D.L. and K.M. Hinkle (Eds.) *Ninth International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks. 2, pp 1469-1474.
- Richter-Menge, J., J. Overland, M. Svoboda, J. Box, M. J. J. E. Loonen, A. Proshutinsky, V. Romanovsky, D. Russell, C. D. Sawatzk, M. Simpkins, I. R. Armstrong, Ashik, L.-S. Bai, D. Bromwich, J. Cappelen, E. Carmack, J. Comiso, B. Ebbinge, I. Frolov, J. C. Gascard, M. Itoh, G. J. Jia, R. Krishfield, F. McLaughlin, W. Meier, N. Mikkelsen, J. Morison, T. Mote, S. Nghiem, D. Perovich, I. Polyakov, J. D. Reist, B. Rudels, U. Schauer, A. Shiklomanov, K. Shimada, V. Sokolov, M. Steele, M.-L. Timmermans, J. Toole, B. Veenhuis, D. Walker, J. Walsh, M. Wang, A. Weidick, and C. Zöckler. 2008: *Arctic Report Card 2008*. <http://www.arctic.noaa.gov/reportcard>.
- Riihelä, A. and T. Manninen, 2008: Measuring the Vertical Albedo Profile of a Subarctic Boreal Forest Canopy, *Silva Fennica, Research note*, 42 (5), 807-815.
- Riseborough D, Shiklomanov N.I., Etselmüller B., Gruber S., and Marchenko, S., 2008: Recent Advances in Permafrost Modeling. *Permafrost and Peregial Processes*, 19, 137–156

- Romanovsky V.E., A.L. Kholodov, S.S. Marchenko, N.G. Oberman, D.S. Drozdov, G.V. Malkova, N.G. Moskalenko, A.A. Vasiliev, D.O. Sergeev, and M.N. Zheleznyak, 2008: Thermal State and Fate of Permafrost in Russia: First Results of IPY, In: Kane, D.L. and K.M. Hinkle (Eds.) Proceedings of the Ninth International Conference on Permafrost, June 29-July 3, 2008, Fairbanks, Alaska, 2, pp. 1511-1518.
- Romanovsky, V.E., S.S. Marchenko, R. Daanen, D.O. Sergeev, and D.A. Walker, 2008: Soil climate and frost heave along the Permafrost/Ecological North American Arctic Transect, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 2, pp. 1519-1524.
- Sherstyukov, B.G., 2008: Regional and seasonal principles of changes of contemporary climate. Obninsk, Publisher "VNIIGMI-MCD", 246 pp. [in Russian]
- Schirrneister L, Grosse G, Kunitzky V, Magens D, Meyer H, Derivyagin A, Kuznetsova T, Andreev A, Kienast F, Grigoriev M, Preusser F, 2008: Periglacial landscape evolution and environmental changes of Arctic lowland areas during the Late Quaternary (Western Laptev Sea coast, Cape Mamontov Klyk). *Polar Research*, 27, 249-272. doi:10.1111/j.1751-8369.2008.00067.x
- Schirrneister L, Meyer H, Wetterich S, Siegert C, Kunitzky VV, Grosse G, Kuznetsova TV, and Derevyagin AYU, 2008: The Yedoma Suite of the Northeastern Siberian Shelf Region: Characteristics and Concept of Formation. In: Kane DL & Hinkel KM (eds), *Ninth International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska Fairbanks, 2, pp. 1595-1600.
- Schneider J, Grosse G, and Wagner D, 2009: Land cover classification of tundra environments in the Arctic Lena Delta based on Landsat 7 ETM+ data and its application for upscaling of methane emissions. *Remote Sensing of Environment*, 113, 380-391. doi:10.1016/j.rse.2008.10.013
- Schuur, E.A.G, J. Bockheim, J. Canadell, E. Euskirchen, C.B. Field, S.V. Goryachkin, S. Hagemann, P. Kuhry, P. Laffleur, H. Lee, G. Mazhitova, F. E. Nelson, A. Rinke, V. E. Romanovsky, N. Shiklomanov, C. Tarnocai, S. Venevsky, J. G. Vogel, S.A. Zimov, 2008: Vulnerability of permafrost carbon to climate change: Implications for the global carbon cycle, *BioScience*, 58, No. 8, 701-714.
- Scibek, J., Allen, D.M. and Whitfield, P.H. 2008 Quantifying the Impacts of Climate Change on Groundwater in an Unconfined Aquifer that is Strongly Influenced by Surface Water. In: W. Dragoni (ed), *Groundwater and Climatic Change*, Geological Society London. 288:79-98.
- Semiletov, I. and Ö. Gustafsson, 2009: East Siberian Shelf Study alleviates scarcity of observations. *EOS*, 90, No. 17, 28 April 2009; 145-146.
- Shakhova N.E., Sergienko V.I., and I.P. Semiletov, 2009: Modern state of the role of the East Siberian Shelf in the methane cycle. *Herald of the Russian Academy of Sciences*, 2009, No. 3, in press
- Shakhova, N., I. Semiletov, A. Salyuk, N. Belcheva, D. Kosmach, and V.I. Sergienko, 2008: On the role of the East-Siberian Shelf in the modern methane cycle and global change, *Herald of the East-Siberian Branch of Russian Academy of Sciences*, 2008, No. 4.
- Shao, C., J. Chen, L. Li, W. Xu, S. Chen, G. Tenney, J. Xu, W. Zhang. Spatial variability in soil heat flux at three Inner Mongolia steppe ecosystems. *Agricultural and Forest Meteorology* **148**, 1433-1443.
- Sharkhuu, N., A. Sharkhuu, V.E. Romanovsky, K. Yoshikawa, F.E. Nelson, and N.I. Shiklomanov, 2008: Thermal State of Permafrost in Mongolia, In *Proceedings of the Ninth International Conference on Permafrost*, June 29-July 3, 2008, Fairbanks, Alaska, 2, pp. 1633-1638.
- Shiklomanov N.I., Nelson F.E., Streletskiy D.A., Hinkel K.M., Brown J., 2008: The Circumpolar Active Layer Monitoring (CALM) Program: Data Collection, Management, and Dissemination Strategies. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 1, 1647-1652.
- Shkolnik I.M., E.K. Molkontin, E.D. Nadezhina, E.I. Khlebnikova, I.A. Sall, 2008: Temperature extremes and wild fires in Siberia in 21st century: the VMGO RCM simulation. *Rus. Meteorol. Hydrol.*, No. 3, 5-15.
- Shuhua Yi, A. David McGuire, Jennifer Harden, Eirc Kasischke, Kristen Manies, Larry Hinzman, Anna Liljedahl, James Randerson, Heping Liu, V. E. Romanovsky, Sergei Marchenko, and Yongwon Kim, 2009: Interactions between soil thermal and hydrological dynamics in the response of Alaska ecosystems to fire disturbance, *Journal of Geophysical Research – Biogeosciences*, in press.
- Siljamo, P., Sofiev, M., Linkosalo, T., Ranta, H., Kukkonen, J., 2008: Development and application of biogenic emission term as a basis of long-range transport of allergenic pollen. *NATO Science for piece and security Series C: Environmental Security. Air pollution modelling and its application*, XIX, Borrego, C., Miranda, A.I. (eds.), Springer, pp.154-162.

- Siljamo, P., Sofiev, M., Severova, E., Ranta, H., Polevova, S., 2008: On influence of long-range transport of pollen grains onto pollinating seasons. *In Air Pollution Modelling and its Applications XVIII* (in press)
- Siljamo, P., Sofiev, M., Severova, E., Ranta, H., Kukkonen, J., Polevova, S., Kubin, E., Minin, A., 2008: Sources, impact and exchange of early-spring birch pollen in the Moscow region and Finland. *Aerobiologia*. DOI 10.1007/s10453-008-9100-8
- Siljamo, P., Sofiev, M., Ranta, H., Linkosalo, T., Kubin, E., Ahas, R., Genikhovich, E., Jatczak, K., Jato, V., Nekovar, J., Minin, A., Severova, E., Shalaboda, V., 2008: Representativeness of point-wise phenological *Betula* data observed in different parts of Europe. *Global Ecology and Biogeography*, 47, 489-502, DOI: 10.1111/j.1466-8238.2008.00383.x.
- Simmons, J.A., W.S. Currie, K.N. Eshleman, K. Kuers, S. Monteleone, T.L. Negley, B.R. Pohlad, and C.L. Thomas, 2008: Forest to reclaimed mine land-use change leads to altered ecosystem structure and function. *Ecological Applications*, 18, 104-118.
- Sofiev, M., Siljamo, P., Ranta, H., Linkosalo, T., Jaeger, S., Jaeger, C., Rasmussen, A., Severova, E., Oksanen, Karppinen, A., Kukkonen, J., 2008: From Russia to Iceland: an evaluation of a large-scale pollen and chemical air pollution episode during April and May, 2006. *Aerobiological Monographs*, Vol. 1, in press.
- Solari, F., Shanahan, J., Ferguson, R., Schepers, J., and A. Gitelson, 2008: Active Sensor Reflectance Measurements of Corn Nitrogen Status and Yield Potential, *Agron. J.*, 100 (3), 571-579. doi:10.2134/agronj2007.0244
- Steele, M. R., A. A. Gitelson, and D.C. Rundquist, 2008: A Comparison of Two Techniques for Non-Destructive Measurement of Chlorophyll Content in Grapevine Leaves, *Agron. J.*, 100 (3), 779-782. doi: 10.2134/agronj2007.0244.
- Steele, M. R., A. A. Gitelson, and D.C. Rundquist, 2009: Non-Destructive Estimation of Anthocyanin Content in Grapevine Leaves. *Am. J. Enol. Vitic.*, 60, 87-92.
- Steele, M. R., A. A. Gitelson, and D.C. Rundquist, 2008: Non-Destructive Estimation of Leaf Chlorophyll Content in Grapes. *Am. J. Enol. Vitic.* 59, 299-305.
- Stenberg, P., M. Rautiainen, T. Manninen, P. Voipio, and M. Möttöus, 2008: Boreal forest leaf area index from optical satellite images: Model simulations and empirical analyses using data from central Finland, *Boreal Env. Res.* 13, 433-443.
- Stenberg, P., Rautiainen, M., Manninen, T., Voipio, P. & Möttöus, M., 2008: Boreal forest leaf area index from optical satellite images: model simulations and empirical analyses using data from central Finland. *Boreal Environment Research*, in press.
- Streletskiy D.A, Shiklomanov N.I, Nelson F.E, Klene A.E. 2008: 13 Years of Observations at Alaskan CALM Sites: Long-term Active Layer and Ground Surface Temperature Trends. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1727-1732
- Syso, A.I. and A.M. Peregon, 2008: Main features of swamping at the southern edge of Great Vasyugan peatland, *Siberian Journal of Ecology*, in press (in Russian).
- Tang, J. and Q. Zhuang, 2008: Equifinality in parameterization of process-based biogeochemistry models: A significant uncertainty source to the estimation of regional carbon dynamics *J. Geophys. Res.*, 113, G04010, doi:10.1029/2008JG000757.
- Tatem, A.J., Goetz, S.J., and Hay, S.I., 2008: *Fifty years of earth observation satellites*. *American Scientist*, 96,390-398
- Tchebakova NM, Parfenova EI, and Soja AJ., 2009: Climate change and hot spots in forest shifts in central Siberia by the end of the XXth century. *Forest and snow landscape research* (in press).
- Tchebakova NM., Parfenova EI and Rehfeldt G. 2009: From vegetation zones to climatypes: effects of climate warming on Siberian ecosystems. *In: Larch forest ecosystems on continuous permafrost of Siberia*. Springer Verlag (in press)
- Turnbull, J. C., Miller, J. B., Lehman, S. J., Hurst, D., Peters, W., Tans, P. P., Southon, J., Montzka, S. A., Elkins, J. W., Mondeel, D. J., Romashkin, P. A., Elansky, N., and Skorokhod, A., 2009: Spatial distribution of ¹⁴CO₂ across Eurasia: measurements from the TROICA-8 expedition, *Atmos. Chem. Phys.*, 9, 175-187.
- Vaganov, E.A., A. N. Zolotokrylin, A. V. Pchelkin, A. A. Velichko, M. V. Gavrilov, A. A. Minin, E. I. Parfenova, A. A. Romanovskaya, NM Tchebakova, 2008: Chapter 3.6. Natural terrestrial ecosystems. *In: An evaluation report on climate change and its consequences in the territory of Russian Federation. V. II. Consequences of climate change*. Moscow: Planeta. 242-255.
- Van Dongen B.E., I.P. Semiletov, J.W.H. Weijers, and Ö. Gustafsson. 2008: Contrasting lipid biomarker composition of terrestrial organic matter exported from across the Eurasian Arctic by the five Great Russian Arctic Rivers, *Global Biogeochemical Cycles*, 22, GB1011, doi:10.1029/2007GB002974.
- Vasiliev, A.A., Leibman, M.O. & Moskalenko, N.G. 2008. Active Layer Monitoring in West Siberia

- under the CALM II Program. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 1815-1821.
- Velichko A.A., Borisova O.K., Zelikson E.M., 2008: Paradoxes of the Last Interglacial climate: reconstruction of the northern Eurasia climate based on palaeofloristic data. *Boreas* 37, 1-19.
- Velichko A.A., Dolukhanov P.M., Kurenkova E.I., 2009: Human socio-Economic Adaptation to Environment in Late Paleolithic, Mesolithic and Neolithic Eastern Europe. *Quaternary International*. (in press).
- Vetrov, A.A., I.P. Semiletov, O.V. Dudarev, V.I. Peresipkin, and A.N. Charkin, 2008: Study of composition and origin of organic matter in the East-Siberian Sea bottom sediments, *Geokhimiya (Geochemistry)*, 3, 183-195 (in Russian; translated in English).
- Walker, D.A., U.S. Bhatt, M.K. Reynolds, V.E. Romanovsky, G.P. Kofinas, J.P. Kuss, B.C. Forbes, F. Stammer, T. Kumpula, E. Kaarlejärvi, M.O. Leibman, N.G. Moskalenko, A.A. Gubarkov, A.V. Khomutov, D.S. Drozdov, H.E. Epstein, Q. Yu, G.J. Jia, Kaplan, J.O. and J.C. Comiso. 2009: Cumulative effects of rapid land-cover and land-use changes on the Yamal Peninsula, Russia. In: Gutman, G. (ed.) *Eurasian Arctic Land Cover and Land Use in a Changing Climate*. (in press)
- Walker, I.J. and R. Sydney-Smith. 2008. British Columbia; in *From Impacts to Adaptation: Canada in a Changing Climate*. Edited by D.S. Lemmen, F.J. Warren, J. Lacroix, and E. Bush. Government of Canada, Ottawa, Ottawa. Pp 329-386.
- Walsh, J. E., Chapman, W. L., Romanovsky V. E., Christensen, J. H. and M. Stendel, 2008: Global Climate Model Performance over Alaska and Greenland, *J. Climate*, 21, doi: 10.1175/2008JCLI2163.1.
- Walter, K. M., Duguay, C., Jeffries, M., Engram, M., and Chapin III, F. S., 2008: Potential use of synthetic aperture radar (SAR) for estimating methane ebullition from arctic lakes, *J. Amer. Water Res. Assoc.*, 44, No.2, 305 - 315 Doi: 10.1111/j.1752-1688.2007.00163.x
- Walter, K. M., J.P. Chanton, T. Schuur, S.A. Zimov, F.S. Chapin III, 2008: Methane Production and Bubble Emissions from Arctic Lakes: Implications from ¹⁴C and Stable Isotope Compositions. *J. Geophys. Res. – Biogeosciences* 113 G00A08, doi:10.1029/2007JG000569.
- Walter, K. M., M. Engram, C. Duguay, M. Jeffries, and F.S. Chapin, III, 2008: The potential use of synthetic aperture radar (SAR) for estimating methane ebullition from arctic lakes. *J. Amer. Water Res. Assoc.*, 44, 305-315.
- Walter, K. M., S. A. Zimov, F. S. Chapin III, Q. Zhuang, D. Valentine, 2009: Methane bubbles in lake ice: A new method to evaluate emissions from arctic lakes, *BioScience (in review)*.
- Wand, L., L. Zhen X. Liu O. Batkhisig, Q. Wang, 2008: Comparative studies on climate changes and influencing factors in central Mongolian Plateau Region [J]. [Geographical Research](#), 27(1), 171-180.
- Wilske B., N. Lu, L. Wei, S. Chen, T. Zha, C. Liu, W. Xu, A. Noormets, J. Huang, Y. Wei, J. Chen, Z. Zhang, J. Ni, G. Sun, K. Guo, S. McNulty, R. John, X. Han, G. Lin, J. Chen., 2009: Poplar plantation alters water balance in semiarid Inner Mongolia. *J. Environ. Management* (accepted)
- Xiao, J., Q. Zhuang, D.D. Baldocchi, and Co-Authors, 2008: Estimation of net ecosystem carbon exchange for the conterminous United States by combining MODIS and AmeriFlux data. *Agricultural and Forest Meteorology*, 148, 1827-1847
- Zamolodchikov D., et al. 2008: Recent climate and active layer changes in Northeast Russia: regional output of Circumpolar Active Layer Monitoring (CALM). *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 2021-2027.
- Zepalov F.N, Grebenetz V.I., Streletskiy D.A., Shiklomanov N.I. 2008: Active layer monitoring in Taimyr Peninsula, Russia. *Proceedings of the 9th International Conference on Permafrost*, Institute of Northern Engineering, University of Alaska, Fairbanks, 2, 2037-2042.
- Zhang, N., H.H. Shugart, and X. Yan, 2009: Simulation the effects of climatic changes on Eastern Eurasia forests. *Climatic Change*, 95, 341-361, doi: 10.1007/s10584-009-9568-4.
- Zhang, W.L., S.P. Chen, J. Chen, L. Wei, X.G. Han, G.H. Lin. 2007. Biophysical regulations of carbon fluxes of a steppe and a cultivated cropland in semiarid Inner Mongolia. *Agricultural and Forest Meteorology* 146, 216-229.
- Zhao, L., Marchenko, S.S., Sharkhuu, N., and Wu, T., 2008: Regional Changes of Permafrost in Central Asia (Plenary Paper). *Proceedings of the Ninth International Conference on Permafrost*, University of Alaska Fairbanks, June 29 - July 3, 2008, 2, 2061-2069.
- Zhen, L., J. Liu, X. Liu, L. Wang, O. Batkhisig, Q. Wang, 2008: Structural Change of Agriculture-Livestock System and Affecting Factors in Mongolian Plateau[J]. *Journal of Arid Land Resources and Environment*, 22(1), 144-151.
- Zhuang, Q. T. Zhang, J. Xiao and T. Luo, 2008: Quantification of net primary production of

- Chinese forest ecosystems with spatial statistical approaches *Mitig. Adapt Strateg. Glob. Change*, doi:10.1007/s11027-008-9152-7.
- Zhuang, Q., and W.S. Reeburgh, 2008: Introduction to special section on synthesis of recent terrestrial methane emission studies *J. Geophys. Res.*, 113, G00A02, doi:10.1029/2008JG00749.
- Zhuang, Q., J. Melack, S. A. Zimov, K. M. Walter, C.L. Butenhoff, and M.A.K. Khalil, 2009: Global Methane Emissions from Wetlands, Rice Paddies, and Lakes, *EOS*, 90, (3 February 2009), 37-38.
- Атлас-монография «Палеоклиматы и палеоландшафты внетропического пространства Северного полушария. Поздний плейстоцен – голоцен», 2009: (отв. ред. – А.А.Величко,) М., ГЕОС. 114 с. + 25 карт (in press)
- Величко А.А., Долуханов П.М., Куренкова Е.И., 2008: Система адаптации человек - социально-хозяйственная структур – окружающая среда в позднем палеолите, мезолите и неолите Восточной Европы. В сб. «Путь не Север. Окружающая среда и самые ранние обитатели Арктики и Субарктики» ИГ РАН, ИИМК РАН, М., 2008. С. 14-32
- Величко, А.А., Н.Р.Катто, А.С.Тесаков, В.В.Титов, Т.Д.Морозова, В.В.Семенов, С.Н.Тимирева Особенности строения плейстоценовой лессово-почвенной формации юга Русской равнины по материалам Восточного Приазовья. ДАН, (in press).
- Величко А.А., Куренкова Е.И., 2009: Расселение древнего человека в позднем плейстоцене // атлас-монография Северного полушария. (in press)
- Величко А.А., Морозова Т.Д., Тимирева С.Н., Нечаев В.П., Борисова О.К., Тесаков А.С., Титов В.В., Семенов В.В., Кононов Ю.М., 2008: Хроностратиграфия и палеогеография плейстоцена юга Восточно-Европейской равнины по материалам исследований лессово-почвенных формаций Восточного Приазовья. Материалы международной конференции «Ранний палеолит Евразии: новые открытия», Ростов-на-Дону, 2008. С. 42-43.
- Величко А.А., Нечаев В.П., 2009: Раздел «Субаэральная криолитозона» в коллективной монографии «Палеоклиматы и палеоландшафты внетропического пространства Северного полушария. Поздний плейстоцен-голоцен» (in press).
- Величко А.А., Писарева В.В., Фаустова М.А., 2008: Средневалдайский мегаинтерстадиал – окно прорыва человека в высокие широты. Сборник тезисов научной конференции «Вклад России в МПГ», Сочи, 2008. С. 66.
- Рысков Я. Г., Величко А. А., Николаев В. И., Олейник С. А., Тимирева С. Н., Нечаев В.П., Панин П. Г., Морозова Т. Д., 2008: Реконструкция палеотемператур и осадков в плейстоцене по изотопному составу гумуса и карбонатов лессов Русской равнины. Почвоведение, № 9, 2008. С. 1062-1070
- Тимирева С.Н., Величко А.А., 2008: Субаэральные процессы в эпоху обитания стоянки Заозерье на р. Чусовой. – Тезисы докладов научной конференции «Вклад России в МПГ», Сочи, 2008. С. 74.

Papers published in 2007

- Adam, J.C., I. Haddeland, F. Su, and D. P. Lettenmaier, 2007: Simulation of reservoir influences on annual and seasonal streamflow changes for the Lena, Yenisei and Ob' rivers, *J. Geophys. Res.*, **112**, D24114, doi:10.1029/2007JD008525.
- Alexeev, V. A., Nicolsky, D. J., Romanovsky, V. E. and D. M. Lawrence, 2007: An evaluation of deep soil configurations in the CLM3 for improved representation of permafrost, *Geophysical Research Letters*, **34**, L09502, doi:10.1029/2007GL029536, 2007.
- Anisimov, O., Vaughan, D.G., Callaghan, T., Furgal, C., Marchant, H., Prowse, T., Viljalmason, H., Walsh, J., Nelson, F.E., Vandenburghe, J., Wrona, F.J., Reist, J.D., Christensen, T.R., Nuttall, M., Forbes, D., and Berner, J., 2007: Polar Regions In: *Climate Change: Impacts, Adaptation, and Vulnerability, the Contribution of Working Group II of the Intergovernmental Panel on Climate Change Fourth Assessment Review*. Cambridge: Cambridge University Press.
- Anisimov, O.A., Lobanov, V.A., Reneva, 2007: Analysis of the surface air temperature changes over the territory of Russia and its empirical projection for the first quarter of the 21st century. *Meteor. Hidrologia (Russian Meteorology and Hydrology)*, 2008, No.10, 20-xx.
- Anisimov, O.A., Lobanov, V.A., Reneva, S.A., Shiklomanov, N.I., Zhang, T., 2007: Uncertainties in gridded air temperature fields and their effect on predictive active layer modeling. *J. Geophys. Res.*, **112**, F02S14, doi:10.1029/2006JF000593.
- Baklanov, A. 2007: Urban air flow researches for air pollution, emergency preparedness and urban weather prediction. Chapter 9 in: *Flow and transport processes with complex obstructions*. Editors Ye.A. Gayev and J.C.R. Hunt. NATO Science Series book, Springer, pp. 311-357.
- Baklanov, A.: 2007: Environmental Risk and Assessment Modelling: Scientific Needs and Expected Advancements. In "Air, Water and Soil Quality Modelling for Risk and Impact Assessment", NATO Security Through Science, Series C - Environmental Security. Eds. A. Ebel, T. Davitashvili, Springer Elsevier Publishers, pp. 29-44.
- Balshi M.S., A.D.McGuire, Q. Zhuang, J.M.Melillo, D.W. Kicklighter, E.Kasischke, C. Wirth, M. Flannigan, J.Harden, J.S.Clein, T.J. Burnside, J.McAllister, W.A.Kurz, M.Apps, and A. Shvidenko, 2007: The role of historical fire disturbance in the carbon dynamics of the pan-boreal region: A process-based analysis. *J. Geophys. Res.*, **112**, G02029.
- Balzter, H., Gerard, F., Weedon, G., Grey, W., Combal, B., Bartholome, E., Bartalev, S. and Los, S., 2007: Coupling of vegetation growing season anomalies with hemispheric and regional scale climate patterns in Central and East Siberia, *J. Climate*, **20**, 3713-3729.
- Baranova, A.A., M.P. Golod, and A.V. Meshcherskaya, 2007: The change of graduated wind velocities over the territory of Russia in the second half of the 20th century. *Transactions of the Voeikov Main Geophysical Observatory*, **556**, 116-138 (in Russian).
- Belelli, L., Machesini L., Papale D, Reichtein M., Vichard N., Tchebakova N, and Valentini R., 2007: Carbon balance assessment of a natural steppe of southern Siberia by multiple constraint approach. *Biogeosciences*, **4**, 581-595
- Boettger T., Junge F.W., Knetsch S., Novenko E.Yu., Borisova O.K., Kremenetski K.V., Velichko A.A. 2007: Indications of short-term climate warming in the very end of the Eemian in terrestrial records of Central and Eastern Europe. In: *The climate of past interglacials*. F. Sirokko, M. Claussen, M.F. Sánchez-Gofñi & T. Litt (eds.). *Developments in Quaternary Science*, **7**. Amsterdam: Elsevier, 2007, pp. 265-275.
- Bunn, A.G. S.J. Goetz, J.S. Kimball, K.Zhang, 2007: Northern High Latitude Ecosystems Respond to Recent Climate Change, *EOS*, **88(34)**,333-335
- Cheng, X., S. An, J.Chen, B. Li, Y. Luo, J. Chen, S. Liu, and Y. Liu, 2007: Spatial relationships among species, aboveground biomass, N, and P in disturbed prairie communities. *Journal of Arid Environment*, **68**, 652-667.
- Fleming, S.W., P.H. Whitfield, R.D. Moore, and E. J. Quilty. 2007: Regime-dependent streamflow sensitivities to Pacific climate modes across the Georgia-Puget transboundary ecoregion. *Hydrologic Processes*. **21**, 3264-3287.
- Frey, K.E. & Smith, L.C. 2007: How well do we know northern land cover? Comparison of four global vegetation and wetland products with a new ground-truth database for West Siberia. *Global Biogeochemical Cycles* **21**, GB1016, doi: 10.1029/2006GB002706.
- Frey, K.E., McClelland, J.W., Homes, R.M. & Smith, L.C., 2007: Impacts of climate warming and permafrost thaw on the riverine transport of

- nitrogen and phosphorus to the Kara Sea. *Journal of Geophysical Research-Biogeosciences* 112, G04S58, doi:10.1029/2006JG000369.
- Frey, K.E., Siegel, D.I. & Smith, L.C., 2007: Geochemistry of West Siberian streams and their potential response to permafrost degradation. *Water Resources Research*, 43, W03406, doi: 1029/2006WR0049022006.
- Georgiadi A.G. (Ed. and author) 2007: *Methods of scenario estimation of hydrologic changes under global climate warming within large river basin of the Arctic Ocean watershed*, Max Press, 140 pp., (in Russian).
- Georgiadi A.G. and Zolotokrylin A.N. (Eds. and authors), 2007: Heat and water exchange of permafrost landscapes of Eastern Siberia and their factors. 576 pp. (in Russian)
- Georgiadi A.G., Milyukova I.P., 2007: River runoff in the largest river basins of southern slope of Russian plain in Late Atlantic Optimum. *Izv. RAN, Ser. Geogr.*, No. 6, 113- 124 (in Russian)
- Gitelson, A.A., Schalles, J., Hladik, C.M., 2007: Remote chlorophyll-a retrieval in turbid productive estuarine: Chesapeake Bay case study. *Remote Sensing of Environment*, 109, 464–472.
- Gitelson, A.A., Wardlow, B. D., Keydan, G. P. and B. Leavitt, 2007: An Evaluation of MODIS 250-m Data for Green LAI Estimation in Crops, *Geophys. Res. Lett.*, 34, L20403, doi:10.1029/2007GL031620.
- Groisman, P., I. Sokolik, K. Hibbard, G. Brasseur, and J. Katzenberger, 2007: Northern Eurasia in the global Earth system, *Eos Trans. AGU*, 88(46), 487 (+ Suppl. Material at http://www.agu.org/eos_elec/2007/groisman_88_4_6_487.html)
- Grosse G, Schirmermeister L., Siegert Ch., Kunitsky VV., Slagoda E.A., Andreev A.A., Dereviagyn A.Yu., 2007: Geological and geomorphological evolution of a sedimentary periglacial landscape in Northeast Siberia during the Late Quaternary. *Geomorphology*, 86(1-2), 25-51; doi:10.1016/j.geomorph.2006.08.005.
- Gutowski, W.J., H. Wei, C.J. Vörösmarty, and B.M. Fekete, 2007: Influence of arctic wetlands on arctic atmospheric circulation. *J. Climate*, 20, 4243-4254.
- Hinkel, K. M. and Nelson, F. E., 2007: Anthropogenic heat island at Barrow, Alaska, during winter: 2001-2005. *J. Geophys. Res.-Atmospheres*, 112, doi:10.1029/2006JD007837
- Huang, D., Knyazikhin, Y., Dickinson, R.E., Rautiainen, M., Stenberg, P., Disney, M., Lewis, P., Cescatti, A., Tian, Y., Verhoef, W., Martonchik, J.V. and Myneni, R.B., 2007: Canopy spectral invariants for remote sensing and model applications. *Remote Sensing of Environment*, 106, 106-122.
- Ivanova G.A., Ivanov V.A., Kukavskaya E.A., Conard S.G., McRae D.J., 2007: Fire influence on carbon emissions in Scots pine stands of central Siberia. *Siberian Ecological Journal*, 2007, No. 6, 885-895.
- Karppinen, A., Sofiev, M., Siljamo, P., Kukkonen, J., Ranta, H., Linkosalo, T., Jäger, S., Rasmussen, A., Nicklaß, D., Wanner, L., 2007: Pollen: A Challenge for Environmental Information Services, In: *Olgierd Hryniewicz, Jan Studziński, Anna Szewiwo (Eds.): EnviroInfo Warsaw 2007, Environmental Informatics and Systems Research*, vol. 2: Workshop and application papers, *The 21st International Conference on "Informatics for Environmental Protection" Warsaw, Poland, Shaker Verlag, Aachen 2007*, ISBN 978-3-8322-6397-3, ISSN 1616-0886, pp.75-79.
- Kattsov V.M., Walsh J.E., Chapman W.L., Govorkova V.A., Pavlova T.V., Zhang, X., 2007: Simulation and projection of arctic freshwater budget components by the IPCC AR4 global climate models, *J. Hydrometeorol.*, 8, 571-589.
- Khan V.M., Rubinstein K.G., Shmakin A.B., 2007: Comparison of seasonal and interannual variability of snow cover in Russian river basins according to observations and reanalyses. *Izvestia RAS, Atmospheric and Oceanic Physics*, 43, No 1, pp.69-80.
- Kienast F, Tarasov P, Schirmermeister L, Grosse G, and Andreev AA, 2007: Continental climate in the East Siberian Arctic during the last interglacial: implications from palaeobotanical records. *Global and Planetary Change*, 60 (3-4), 535-562. doi:10.1016/j.gloplacha.2007.07.004
- Kislov A.V., Georgiadi A.G., Alekseeva L.I., Borodin O.O. 2007: Creation of air temperature and atmospheric precipitation fields in regions with rare measurement network (on example of Lena river basin). *Meteorology and Hydrology*, No. 8, 41-48 (in Russian)
- Kosykh N., Mironysheva-Tokareva N., Peregon A., Parshina E. 2007: Net primary production at wetland ecosystems of Middle Taiga in western Siberia. *Siberian Journal of Ecology*, (in press) [in Russian; the publication is scheduled on July, 2008].
- Kuemmerle, T., P. Hostert, V. C. Radeloff, K. Perzanowski, and I. Kruhlov, 2007: Post-socialist forest disturbance in the Carpathians. *Ecological Applications*, 10, 233-247.
- Kurosaki, Y., and M. Mikami, 2007: Threshold wind speed for dust emission in east Asia and its seasonal variations, *J. Geophys. Res.*, 112, D17202, doi:10.1029/2006JD007988

- Lammers, R. B., J. W. Pundsack, and A. I. Shiklomanov, 2007: Variability in river temperature, discharge, and energy flux from the Russian pan-Arctic landmass, *J. Geophys. Res.*, 112, G04S59, doi:10.1029/2006JG000370.
- Leibman M.O., Kizyakov A.I., 2007: *Cryogenic Landslides of the Yamal and Yugorsky Peninsulas*. Moscow, Earth Cryosphere Institute SB RAS, 206 pp. (in Russian)
- Loboda, T., O'Neal, K.J., Csiszar, I., 2007: Regionally adaptable dNBR based algorithm for burned area mapping from MODIS data. *Remote Sensing of Environment*, 109, 429 - 442.
- Loboda, T. and Csiszar, I., 2007: Assessing the Risk of Ignition in the Russian Far East within a Modeling Framework of Fire Threat. *Ecological Applications*, 17 (3), 791-805.
- Lopez, B., N.I., Shiklomanov, F. E. Nelson, K. Walter, B. Hallet, R. S. Stetten, 2007: A Threatening Thaw. National Geographic Magazine. December issue. pp. 137-154.
- Macdonald R.W., Anderson L.G., Christensen J.P., Miller L.A., Semiletov, I.P., and R. Stein, 2007: The Arctic Ocean: budgets and fluxes, A chapter in "Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis," Edited by K.-K. Liu, L. Atkinson, R. Quinones, L. Talae-McManus, Springer-Verlag.
- Mahura A., Korsholm U.S., Baklanov A., Rasmussen A., 2007: Elevated birch pollen episodes in Denmark: Contributions from remote sources. *Aerobiologia*, 23, 171-179.
- Marchenko, S., Gorbunov, A. and V. Romanovsky. 2007: Permafrost Warming in the Tien Shan Mountains, Central Asia. *Global and Planetary Change*, 56, 311 – 327.
- Marchenko, S., Romanovsky, V. and A. Gorbunov, 2007: Changes in Climate and Permafrost and Impact on Scythian Frozen Tombs in the Mountains of Central Asia. In Proceedings of the UNESCO Conference: "The Frozen Tombs of the Altay Mountains: Strategies and Perspectives", Gornoaltaysk, Russia. 283-299.
- Mazhitova G.G., Kaverin D.A. 2007: Thaw depth dynamics and soil surface subsidence at a Circumpolar Active Layer Monitoring (CALM) site in the East European Russian Arctic. *Kriosfera Zemli*, vol. XI, N. 4:20-30. (In Russian)
- Meleshko, V.P., V.M. Mirvis, V.A. Govorkova, 2007: Do air temperature trends from coupled atmosphere-ocean models agree with the observed climate warming in Russia. *Meteor. Hidrologia (Russian Meteorology and Hydrology)*, 2007, No. 10, 5-19.
- Möttus, M., Stenberg, P. and Rautiainen, M. 2007. Photon recollision probability in heterogeneous forest canopies: compatibility with a hybrid GO model. *Journal of Geophysical Research – Atmospheres*. 112, D103104, doi:10.1029/2006JD007445.
- Nicolosky, D. J., Romanovsky, V.E., and G. S. Tzipenko, 2007: Using in-situ temperature measurements to estimate saturated soil thermal properties by solving a sequence of optimization problems, *The Cryosphere*, 1, 41–58, 2007.
- Pavlova, T.V., V.M. Kattsov, Ye.D. Nadyozhina, P.V. Sporyshev, V.A. Govorkova, 2007: Terrestrial cryosphere evolution through the 20th and 21st centuries as simulated with the new generation of global climate models. *Earth Cryosphere*, 11, No.2, 3-13.
- Popova V.V. 2007: Winter snow depth variability over northern Eurasia in relation to recent atmospheric circulation changes. *International Journal of Climatology*, 27, pp.1721-1733.
- Prokushkin A.S. and Guggenberger G., 2007: Role of Climate in Removing Dissolved Organic Matter from Cryolithozone Watersheds in Central Siberia. *Rus. Meteorology and Hydrology*, 32(6), 404–412.
- Prokushkin A.S., Gleixner G., McDowell W.H., Ruehlow S., Schulze, E.-D. 2007: Source- and substrate-specific export of dissolved organic matter from permafrost-dominated forested watershed in central Siberia. *Global Biogeochemical Cycles*, 21 (4): Art. No. GB4003.
- Rautiainen, M., Suomalainen, J., Möttus, M., Stenberg, P., Voipio, P., Peltoniemi, J. and Manninen, T. 2007: Coupling forest canopy and understory reflectance in the Arctic latitudes of Finland. *Remote Sensing of Environment*, 10, 332-343.
- Repina, I.A., I. Semiletov, A.S. Smirnov, 2007: Direct measurement of CO₂ fluxes in the Laptev Sea in summer, *Transactions of Russian Academy of Sciences*, 413 (5), (translated in English by Springer).
- Richter-Menge, J., J. Overland, A. Proshutinsky, V. Romanovsky, R. Armstrong, J. Morison, S. Nghiem, N. Oberman, D. Perovich, I. Rigor, L. Bengtsson, R. Przybylak, A. Shiklomanov, D. Walker, and J. Walsh, 2007: The Poles: Arctic. In: A. Argues, (Ed.), State of the Climate in 2006. Special Supplement to the *Bulletin of the American Meteorological Society*, 88,, S62-S71.
- Romanovsky, V. E., Marchenko, S. S., Daanen, R., Nicolosky, D. J., Sergeev, D. O., and D. A. Walker, 2007: Air and soil temperatures and frost heave along the Permafrost/Ecological North American Arctic Transect, In Proceedings of the International Conference: *Cryogenic Resources of Polar Regions*, Salekhard, Russia, June 17-20, 2007, vol. 1, pp. 39-42.

- Romanovsky, V., Walter, K. *et al.* 2007: Ice in the Ground, Chapter 4 in *The Global Outlook for Ice & Snow*, Center for International Climate and Environmental Research (CICERO) and UNEP, xx pp.
- Romanovsky, V.E., Gruber, S., Instanes, A., Jin, H., Marchenko, S.S., Smith, S.L., Trombotto, D., and K.M. Walter, 2007: Frozen Ground, Chapter 7, In: *Global Outlook for Ice and Snow*, Earthprint, UNEP/GRID, Arendal, Norway, pp. 181-200.
- Ruuskanen, T.M.; Kaasik, M.; Aalto, P.P.; Hörrak, U.; Vana, M.; Mårtensson, E.M.; Yoon, Y.J.; Keronen, P.; Mordas, G.; Ceburnis, D.; Nilsson, E.D.; O'Dowd, C.; Noppel, M.; Alliksaar, T.; Ivask, J.; Sofiev, M.; Prank, M.; Kulmala, M. 2007: Concentrations and fluxes of aerosol particles during the LAPBIAT measurement campaign in Värriö field station. *Atmospheric Chemistry and Physics*, 7, 3683 - 3700. (<http://www.atmos-chem-phys.net/7/3683/2007/acp-7-3683-2007.pdf>), *Atmospheric Chemistry and Physics Discussions*, 7, 709 -751. (<http://www.atmos-chem-phys-discuss.net/7/709/2007/>).
- Saarikoski, S., Sillanpää, M., Sofiev, M., Timonen, H., Saarnio, K., Teinilä, K., Karppinen, A., Kukkonen, J., Hillamo, R., 2007: Chemical composition of aerosols during a major biomass burning episode over northern Europe in spring 2006: experimental and modelling assessments. *Atmosph. Environ.*, 41, 3577-3589.
- Scibek, J., Allen, D.M., Cannon, A. and P.H. Whitfield. 2007. Groundwater-Surface Water Interaction Under Scenarios of Climate Change Using a High-Resolution Transient Groundwater Model. *Journal of Hydrology*, 333, 165-181.
- Semiletov, I., I.I. Pipko, I.A. Repina, and N. Shakhova, 2007: Carbonate dynamics and carbon dioxide fluxes across the atmosphere-ice-water interfaces in the Arctic Ocean Pacific sector of the Arctic, *J. Marine Systems*, 66 (1-4), 204-226.
- Semiletov, I.P. and I.I. Pipko, 2007: Sinks and sources of carbon dioxide in the Arctic Ocean, *Transactions of Russian Academy of Sciences*, 414 (3), (translated in English by Springer).
- Shahgedanova, M., Popovnin, V., Aleynikov, A., Petrakov, D. and Stokes, C.R. 2007: Long-term Change, Inter-annual, and Intra-seasonal Variability in Climate and Glacier Mass Balance in the Central Greater Caucasus, Russia. *Annals of Glaciology*, 46. 355-361.
- Shakhova, N. and I. Semiletov, 2007: Methane release and coastal environment in the East Siberian Arctic shelf, *J. Marine Systems*, 66 (1-4), 227-243.
- Shakhova, N., I. Semiletov, A. Salyuk, N. Belcheva, and D. Kosmach, 2007: Anomalies of methane in air above the sea surface in the East-Siberian Arctic shelf, *Transactions of Russian Academy of Sciences*, 414 (6), (translated in English by Springer).
- Shakhova, N., I. Semiletov, and N. Belcheva, 2007: The Great Siberian Rivers as a source of methane on the Russian Arctic shelf, *Transactions of Russian Academy of Sciences*, 414 (5), (translated in English by Springer).
- Sharkhuu A., Sharkhuu N., Etzelmuller B., Heggem ESF., Nelson FE., Shiklomanov NI., Goulden CE., Brown J., 2007: Permafrost Monitoring in the Hovsgol Mountain Regions, Mongolia. *Journal of Geophysical Research-Earth Surface*, doi: 10.1029/2006JF000543
- Shi, H., J. Liu, D. Zhuang, Y. Hu, 2007: Using the RBFN model and GIS technique to assess wind erosion hazard of Inner Mongolia, China. *Land Degradation & Development*, 18, 413-422.(SCI).
- Shiklomanov NI., Anisimov OA, Zhang T, Marchenko SS, Nelson FE, Oelke C., 2007: Comparison of model-produced active layer fields: Results for northern Alaska, *J. Geophys. Res.*, 112, F02S10, doi:10.1029/2006JF000571.
- Shiklomanov, A. I., R. B. Lammers, M. A. Rawlins, L. C. Smith, and T. M. Pavelsky, 2007: Temporal and spatial variations in maximum river discharge from a new Russian data set, *J. Geophys. Res.*, 112, G04S53, doi:10.1029/2006JG000352.
- Shkolnik I.M., V.P. Meleshko, V.M. Kattsov, 2007: The MGO climate model for Siberia. *Rus. Meteorol. Hydrol.*, 32, 6, DOI:10.3103/S1068373907060015, pp. 351-359.
- Sitch, S., A.D. McGuire, J. Kimball, N. Gedney, J. Gamon, R. Engstrom, A. Wolf, Q. Zhuang, J. Clein, and K. C.McDonald, 2007: Assessing the carbon balance of circumpolar arctic tundra using remote sensing and process modeling, *Ecological Applications*, 17(1), 213-234.
- Smith, L. C., T. M. Pavelsky, G. M. MacDonald, A. I. Shiklomanov, R. B. Lammers, 2007: Rising minimum flows in northern Eurasian rivers suggest a growing influence of groundwater in the high-latitude water cycle. *J. Geophys. Res.*, 112, G04S47, doi:10.1029/2006JG000327
- Sogachev A.F., Varlagin A.V., Olchev A.V., Kurbatova J.A., Vygodskaya N.N., 2007: Application of mathematical model for estimation of effects of spatial heterogeneity of vegetation cover on CO2 and H2O fluxes in forest ecosystems of the Southern European taiga. *Transactions of the Central Forest Biosphere Reserve*, 5, (in Russian), pp. 448-457.
- Song, L., A.J. Cannon, and P.H. Whitfield. 2007. Changes in seasonal patterns of temperature and precipitation in China during 1971-2000.

- Advances in Atmospheric Research*. 24(3), 459-473.
- Stanilovskaya Yu.V., Ukhova Yu.A., Sergeev D.O., Romanovsky V.E., 2007: The TSP Programm in the Northern Baikal mountains: permafrost and active layer temperature. In Proceedings of *Cryogenic Resources of Polar region International Conference, Salekhard, Russia, June 17-21, 2007*, vol 1, pp. 176-177 (in Russian).
- Stenberg, P. 2007. Simple analytical formula for calculating average photon recollision probability in vegetation canopies. *Remote Sensing of Environment*, 109, 221-224.
- Stendel, M., V.E. Romanovsky, J.H. Christensen, and T.S. Sazonova, 2007: Global warming and permafrost: Closing the gap between climate model simulations and local permafrost dynamics, *Global and Planetary Change*, 56, 203-214.
- Stokes, C.R., Popovnin, V., A. Aleynikov, Gurney, S.D., and Shahgedanova, M. 2007: Recent Glacier Retreat in the Caucasus Mountains, Russia, and Associated Changes in Supraglacial Debris Cover and Supra/proglacial Lake Development. *Annals of Glaciology*, 46. 195-203.
- Tarasova, O.A., Brenninkmeijer, C.A.M., Assonov, S.S., Elansky, N.F., Röckmann, T., Sofiev, M.A. 2007: Atmospheric CO along the Trans-Siberian Railroad and River Ob: source identification using isotope analysis. *J Atmos Chem* DOI 10.1007/s10874-007-9066-x.
- Toews, M.W., P.H. Whitfield and D.M. Allen. 2007: Seasonal Statistics: the seas package for R. *Computers and Geosciences* 33, 944-951.
- Velichko A.A., Novenko E.Y., Zelikson E.M., Boettger T. and Junge F.W. 2007: Comparative Analysis of Vegetation and Climate Changes During the Eemian Interglacial in Central and Eastern Europe. In: *The climate of past interglacials*. F. Sirokko, M. Claussen, M.F. Sánchez-Gofñi & T. Litt (eds.). *Developments in Quaternary Science* 7. Amsterdam: Elsevier, pp. 255 – 264.
- Walter, K. M., L. C. Smith, & F. S. Chapin III. 2007: Methane bubbling from northern lakes: present and future contributions to the global methane budget, *Philosophical Transactions of the Royal Society A*, 365, N. 1856: 1657-1676.
- Walter, K. M., M. Edwards, G. Grosse, S. A. Zimov, F. Stuart Chapin III, 2007: Thermokarst lakes as a source of atmospheric CH₄ during the last deglaciation. *Science*, 318, 633-636.
- Xiao, J. and Q. Zhuang 2007: Drought effects on large fire activity in Canadian and Alaskan forests. *Environ. Res. Lett.*, 2044003 (6pp), doi: 10.1088/1748-9326/2/4/044003.
- Zhang, T., Nelson, F.E., and Gruber, S., 2007 Permafrost and Seasonally Frozen Ground Under a Changing Climate. *Journal of Geophysical Research—Earth Surface*, special issue 112, 21 papers.
- Zhang, W.L., S.P. Chen, J. Chen, L. Wei, X.G. Han, and G.H. Lin, 2007: Biophysical regulations of carbon fluxes of a steppe and a cultivated cropland in semiarid Inner Mongolia. *Agricultural and Forest Meteorology*, 146, 216–229.
- Zhuang, Q., J. M. Melillo, A. D. McGuire, D. W. Kicklighter, R. G. Prinn, P. A. Steudler, B. S. Felzer, and S. Hu, 2007: Net emissions of CH₄ and CO₂ in Alaska: implications for the region's greenhouse gas budget. *Ecological Applications*, 17(1), 203–212.
- Величко А.А., Морозова Т.Д., Нечаев В.П., Тимирева С.Н. 2007: Две модели развития лесово-почвенно-криогенной формации на Восточно-Европейской равнине – Материалы V Всероссийского совещания по изучению четвертичного периода. *Фундаментальные проблемы квартера: итоги изучения и основные направления дальнейших исследований*. М., 57-59
- Величко А.А., Морозова Т.Д., Панин П.Г. 2007: – Почвенные полигенетические комплексы как системный феномен плейстоценовых макроциклов. *Известия РАН, сер. геогр.*, 2007, № 2, с. 44-54
- Величко А.А., Тимирева С.Н., Кременецкий К.В., МакДональд Г., Смит Л. 2007: - Западно-Сибирская равнина в облике поднеледниковой пустыни. *Изв. РАН, сер. географ.*, № 4, 2007, с. 16-28.

Papers published in 2006

- Aizen V. A., Kuzmichenok V. A., Surazakov A. V., Aizen E. M. 2006: Glacier changes in central and

- northern Tien Shan during the last 140 years based on surface and remote sensing data. - *Annals of Glaciology*, 43, 202-213.
- Aizen, V.B., E.M. Aizen, D. R. Joswiak, K. Fujita, N. Takeuchi, S.A. Nikitin, 2006: Climatic and atmospheric circulation pattern variability from ice-core isotope/geochemistry records (Altai, Tien Shan and Tibet), *Annals of Glaciology*, 43, 213-226.
- Alig, R.J., O.N. Krankina, A. Yost, and J. Kuzminykh, 2006: Forest Carbon Dynamics in the Pacific Northwest (USA) and the St. Petersburg Region of Russia: Comparisons and Policy Implications, *Climatic Change*, Jan 2006, 1 - 26, doi 10.1007/s10584-006-9077-7, URL <http://dx.doi.org/10.1007/s10584-006-9077-7>
- Ananicheva M.D., A.N.Krenke. Evolution of Climatic Snow Line and Equilibrium line Altitudes in the North-Eastern Siberia Mountains (20th Century). *Ice and Climate News*. No 6, August 2005, 3 – 6.
- Anisimov, O.A. and Reneva, S.A., 2006: Permafrost and changing climate: the Russian perspective. *Ambio*, 35 (4): 169-175.
- Apps, M.J., Shvidenko, A.Z., Vaganov, E.A., 2006: Boreal forests and the environment: A foreword. *Mitigation and Adaptation Strategies for Global Change*, 11, 1-4.
- Baklanov, A. (Ed.), 2006: Modelling of anthropogenic impact on the Arctic environment. / Baklanov, A., A. Mahura, S. Morozov, L. Nazarenko, O. Rigina, N. Tausnev, V. Koshkin. Publisher: Russian Academy of Sciences. USBN 5-91137-007-7 (In Russian). 146 p.
- Baklanov, A. (Ed.), 2006: Modelling of possible environmental consequences of accidents on nuclear risk sites in the European Arctic. / Baklanov, A., S. Morozov, A. Mahura, O. Rigina, L. Nazarenko, N. Tausnev, V. Koshkin, Yu. Fedorenko. Publisher: Russian Academy of Sciences. USBN 5-91137-016-8 (In Russian). 166 pp.
- Baklanov, A. and E. Gordov: 2006: Man-induced Environmental Risks: Monitoring, Management and Remediation of Man-made Changes in Siberia. *Journal of Computing Technologies*, 11(3): 162-171.
- Balzter, H., C.S. Rowland, T. E. Jupp, I. McCallum, A. Shvidenko, S. Nilsson, A. Sukhinin, A. Onuchin and C. Schmullius, 2005: Impact of the Arctic Oscillation pattern on interannual forest fire variability in Central Siberia. *Geophys.Res.Lett.*, 32, L14709, doi:10.1029/2005GL022526
- Beer, C., Lucht, W., Schmullius, C., and Shvidenko, A., 2006: Small net carbon dioxide uptake by Russian forests during 1981-1999. *Geophysical Research Letters*, 33, L15403, doi: 10.1029/2006GL026919.
- Belzil, C., C. S. Roesler, J. P. Christensen, N. Shakhova, and I. Semiletov, 2006: Fluorescence measured using the WETStar DOM fluorometer as a proxy for dissolved matter absorption. *Estuarine Coastal and Shelf Science*, 67, 41-449.
- Bogorodskaya A.V. and Sorokin N.D., 2006: Microbiological diagnostics of state of fire-changed soil in Lower Angara Region pine stands. *Soil Science*, 10, 1258-1266.
- Bogorodskaya A.V., 2006: Pyrogenic factor influence on structure and ecological functions of soil microbial cenoses of the Lower Angara Region pine stands. *Investigations in Russia Internet Journal*, 137, 1277-1288. Available on Internet: <http://zhurnal.ape.relarn.ru/articles/2006/137.pdf>. (in Russian)
- Brown, J. and V. E. Romanovsky, 2006: Status report on the International Permafrost Association's contribution to the International Polar Year. In Proceedings of the International Conference: *Earth Cryosphere Assessment: Theory, Applications and Prognosis of Alternations*, 1, pp. 13 – 19.
- Burn, C. R., and F. E. Nelson, 2006: Comment on "A projection of severe near-surface permafrost degradation during the 21st century" by David M. Lawrence and Andrew G. Slater, *Geophysical Research Letters* 33, L21503, doi:10.1029/2006GL027077.
- Csiszar, I., J. Morissette and L. Giglio, 2006: Validation of active fire detection from moderate resolution satellite sensors: the MODIS example in Northern Eurasia. *IEEE Transactions on Geoscience and Remote Sensing*, 44, no. 7, 1757-1764.
- Dall'Olmo, G and A.A. Gitelson, 2006: Absorption properties of dissolved and particulate matter in turbid productive inland lakes, *Ocean Optics XVIII*, Montreal, Quebec, 9-13 October, 2006, 1-15.
- Dall'Olmo, G and A.A. Gitelson, 2006: Absorption properties of dissolved and particulate matter in turbid productive inland lakes, *Ocean Optics XVIII*, Montreal, Quebec, 9-13 October, 2006, pp. 1-15.
- Dall'Olmo, G. and A. A. Gitelson, 2006: Effect of bio-optical parameter variability and uncertainties in reflectance measurements on the remote estimation of chlorophyll-a concentration in turbid productive waters: modeling results, *Applied Optics*, 20 May 2006, 45, No. 15, 3577-3592
- Delbart N, Le Toan T, Kergoat L, V Fedotova, 2006: Remote sensing of spring phenology in boreal regions: A free of snow-effect method using NOAA-AVHRR and SPOT-VGT data (1982-2004), *Remote Sensing of Environment*, 101, 52-62.
- Dong YS, Qi YC, Liu JY, et al. 2006: Emission

- characteristics of carbon dioxide in the semiarid *Stipa grandis* steppe in Inner Mongolia, China, *J. Environmental Sciences-China*, 18 (3): 488-494.
- Drobushhevskaya O.V., Ponomarev E.I., 2006: Phenological Rhythms of Light Coniferous and Dark Coniferous Taiga in Sayany Mountains using TERRA/MODIS Data. *J. Botanic Investigations*, 14, 35 – 38.
- Dudarev, O.V., I.P. Semiletov, A.N. Charkin, and A.I. Botsul, 2006: Deposition settings on the continental shelf of the East Siberian Sea, *Transactions of Russian Academy of Sciences*, 409 (6), 822-827.
- Dudarev, O.V., I.P. Semiletov, and A.N. Charkin, 2006: Inhomogeneities of the particulate material content in the Lena River-Laptev sea system, *Transactions of Russian Academy of Sciences*, 410 (4).
- Euskirchen, E.S., A.D. McGuire, D.W. Kicklighter, Q. Zhuang, J.S. Clein, R.J. Dargaville, D.G. Dye, J.S. Kimball, K.C. McDonald, J.M. Melillo, V.E. Romanovsky, N.V. Smith, 2006: Importance of recent shifts in soil thermal dynamics on growing season length, productivity, and carbon sequestration in terrestrial high-latitude ecosystems, *Global Change Biology*, 12, 731–750, doi: 10.1111/j.1365-2486.2006.01113.x.
- Euskirchen, E.S., A.D. McGuire, D.W. Kicklighter, Q. Zhuang, J.S. Clein, R.J. Dargaville, D.G. Dye, J.S. Kimball, K.C. McDonald, J.M. Melillo, V.E. Romanovsky, N.V. Smith, 2006: Importance of recent shifts in soil thermal dynamics on growing season length, productivity, and carbon sequestration in terrestrial high-latitude ecosystems, *Global Change Biology*, 12, 731–750, doi: 10.1111/j.1365-2486.2006.01113.x.
- Fyodorov-Davydov D.G., S.P. Davydov. 2006: The seasonal soil thaw in the north Kolyma Lowland. In: *Soil Processes and Spatial and Temporal Organization of Soils*. Moscow, Nauka. p. 455-471 (in Russian).
- George, C., Gerard, F., Rowland, C. and Balzter, H., 2006: Retrospective mapping of burnt areas in Central Siberia using A Modification of the Normalised Difference Water Index, *Remote Sensing of Environment*, 104, 346-359, doi:10.1016/j.rse.2006.05.015.
- Georgiadi A.G., Milyukova I.P., 2006: Features of hydrological anomalies in Volga river basin during the Holocene warm epochs. *Izvestia Russian Academy of Sciences, Ser. Geograph.*, No. 1, 112-120 (in Russian)
- Georgiadi A.G., Milyukova I.P., 2006: Possible river runoff changes within large river basins of Russian Plain in XXI century. *Water management complex of Russia*, No. 1, 62-77 (in Russian)
- Georgiadi A.G., Milyukova I.P., 2006: River runoff changes within Don River basin during epochs of global climate warming. *Problems of Regional Ecology*, No. 2, 23-32 (in Russian)
- Gilbert, M., X. Xiao, J. Domenech, J. Lubroth, V. Martin, and J. Slingenbergh, 2006: Anatidae migration in the Western Palearctic and spread of highly pathogenic avian influenza H5N1 virus, *Emerging Infectious Diseases*, 12, 1650-1656.
- Gitelson, A. A., A. Viña, S. B. Verma, D. C. Rundquist, T. J. Arkebauer, G. Keydan, B. Leavitt, V. Ciganda, G. G. Burba, and A. E. Suyker, 2006: Relationship between gross primary production and chlorophyll content in crops: Implications for the synoptic monitoring of vegetation productivity, *J. Geophys. Res.*, 111, D08S11, doi:10.1029/2005JD006017.
- Gitelson, A. A., G. P. Keydan, and M. N. Merzlyak, 2006: Three-band model for noninvasive estimation of chlorophyll, carotenoids, and anthocyanin contents in higher plant leaves, *Geophys. Res. Lett.*, 33, L11402, doi:10.1029/2006GL026457.
- Gitelson, A.A. (among other authors), 2006: In Mediterranean Land-surface Processes Assessed from Space (H.-J. Bolle, M. Eckardt, D. Koslowsky, F. Maselli, J. Melia Miralles, M. Menenti, F.-S. Olesen, L. Petkov, S. I. Rasool, A.A. Van de Griend Eds.), XXVIII, 760 p., Springer, Berlin - Heidelberg - New York.
- Gorny, V.I. and S.G. Kritsuk, 2006: Possibility of mapping physiographic zones by thermal survey from space. *Doklady Earth Sciences*, 2006, 411A, No.9, 1473-1475 (in English), *Doklady Akademii Nauk*, 2006, 411, No.5, 684-686 (in Russian).
- Groisman, P. Ya., R. W. Knight, V. N. Razuvaev, O. N. Bulygina, and T. R. Karl, 2006: "State of the ground" rarely used characteristic of snow cover and frozen land: Climatology and changes during the past 69 years over Northern Eurasia. *J. Climate*, 19, 4933-4955.
- Grosse G, Schirmer L, and Malthus TJ, 2006: Application of Landsat-7 satellite data and a DEM for the quantification of thermokarst-affected terrain types in the periglacial Lena-Anabar coastal lowland, *Polar Research*, 25 (1), 51-67. doi:10.1111/j.1751-8369.2006.tb00150.x
- Hall, A.W., P.H. Whitfield, and A.J. Cannon. 2006: Recent Variations in Temperature, Precipitation, and Streamflow in the Rio Grande and Pecos River Basins of New Mexico and Colorado. In: *Conservation and Management In: Conservation and Management of Aquatic Resources in Arid Lands. Reviews in Fisheries Science*. 14, 51-78.
- Heino R., Razuvaev V., Kitaev L. 2006: Snow cover changes over Northern Eurasia during the last century. – *Ice and Climate News*, No. 7, pp. 6-7.

- Heiskary, S., Olmanson, L., Gitelson, A., and Chipman, J., 2006: Remote Sensing: Does It Have a Role? *LakeLine*, Spring 2006, 27-35.
- Hollister, R.D., Webber, P.J., Nelson, F.E., and Tweedie, C. E., 2006: Soil thaw and temperature response to air warming varies by plant community: Results from an open-top chamber experiment in northern Alaska. *Arctic, Antarctic, and Alpine Research* 38(2), 206-215.
- Ivanov V.A., Ivanova G.A., and Kukavskaya E.A., 2006: Possible ignition zone of surface fuels by current of lightning in forest. *Forestry*, 5, 40-43.
- Jupp, T.E., Taylor, C.M., Balzter, H., George, C.T., 2006: A statistical model linking Siberian forest fire scars with localized rainfall anomalies, *Geophys. Res. Lett.*, 33, doi: 10.1029/2006GL026679.
- Kade, A., Romanovsky, V. E. and D. A. Walker, 2006: The N-factor of nonsorted circles along a climate gradient in Arctic Alaska, *Permafrost and Periglacial Processes*, 17, 279-289.
- Karelin D.V., 2006: *Functioning of Cryogenic Ecosystems of Northern Eurasia and Alaska*. Moscow State University Publishing, Moscow, Russia, 50 pp.
- Kitaev L., Forland E., Razuvaev V., Tveito O.-E., and Krueger O., 2005: Distribution of snow cover over Northern Eurasia. – *Nordic Hydrology*, 36, No. 4-5, 311-319.
- Kitaev L.M., A.N.Krenke, T.B.Titkova, 2005: Climatic Limits of Snow Storage Increase over Northern Eurasia. *Ice and Climate News*. No. 6, August 2005, 14 – 15.
- Kitaev, L.M., Heino, R., Razuvaev, V.N., and E. Forland, 2006: Duration of snow cover in Northern Europe. – *Russian Meteorol. and Hydrol.* No. 3, 95-100 (in Russian, in English to follow).
- Krenke, A.N. and L.M. Kitaev 2006: Change in snow resources. In: “*Glaciations of northern and central Eurasia now, in the recent past, and in the future*”. Moscow, Nauka (in press, in Russian).
- Kuemmerle, T., V. C. Radeloff, K. Perzanowski, and P. Hostert, 2006: Cross-border comparison of land cover and landscape pattern in Eastern Europe using a hybrid classification technique. *Remote Sensing of Environment*, 103(4), 449-464.
- Kukavskaya E.A. and Ivanova G.A., 2006: Forest fire influence on biomass in central Siberian pine stands. *KrasSAU Herald*, 12, 156-162.
- Kumpula, T., Forbes, B. and Stammer, F., 2006: Combining data from satellite images and reindeer herders in arctic petroleum development: the case of Yamal, West Siberia. *Nordia Geographical Publications*, 35, 17-30.
- Kuzmichenok V. A., 2006: Mathematical and cartographic modeling of water circulation around the Issyk-Kul basin. – In: *Study of the Issyk-Kul lake hydrodynamics with the use of isotopic methods*. Part 2. Bishkek, “Ilim”, 2006, p. 52-89.
- Kuzmichenok, V.A., 2006: Statistical Studies of the body geometry of the valley glaciers of Kyrgyzstan. *Materials of Glaciological Studies*, 100, c. 80-86 (in Russian).
- Liu RG, Liang SL, Liu JY, et al. 2006: Continuous tree distribution in China: A comparison of two estimates from Moderate-Resolution Imaging Spectroradiometer and Landsat data, *J. Geophys. Res.-Atmospheres*, 111 (D8): Art. No. D08101 Apr. 18, 2006.
- Liu RG, Liu JY, Liang SL, 2006: Estimation of systematic errors of MODIS thermal infrared bands, *IEEE Geoscience and Remote Sensing Letters*, 3 (4): 541-545, Oct. 2006.
- Loupian, E.A., A.A Mazurov, E.V. Flitman, D.V. Ershov, G.N. Korovin, V.P. Novik, N.A. Abushenko, D.A. Altyntsev, V.V. Koshelev, S.A. Tashchilin, A.V. Tatarnikov, I. Csiszar, A.I. Sukhinin, E.I. Ponomarev, S.V. Afonin, V.V. Belov, G.G. Matvienko and T. Loboda, 2006: Satellite monitoring of forest fires in Russia at federal and regional levels. *Mitigation and Adaptation Strategies for Global Change*, 11, 113-145.
- Malkova, G.V., 2006: Assessment of geocryologic changes in upper permafrost under climatic and anthropogenic changes. In *Earth Cryosphere Assessment: Theory, Applications and Prognosis of Alterations, Proceedings of the International Conference*. Tyumen, May 29-31, 1, 82-86.
- Marchenko, S., and V. Romanovsky, 2006: Climate Change and Spatially-temporal Dynamics of Altitudinal Permafrost in Central Asia During the Last Millennia (Modeling Approach). International Conference on Scythian Archaeology and the Archaeology of the Altai Mountains. Ghent, Belgium, December 4-6, 2006, pp 8-9.
- Marchenko, S., and V. Romanovsky, 2006: Temporal and Spatial Changes of Permafrost Distribution in the Tien Shan Mountains During the Last Millennia. *Asian Conference on Permafrost*. Lanzhou, China, August 7-9, 2006, 140-141.
- McCallum, I., Obersteiner, M., Nilsson, S., and Shvidenko, A., 2006: A spatial comparison of four satellite derived 1 km global land cover datasets. *International Journal of Applied Earth Observation and Geoinformation*, 8, 246-255
- McGuire, A.D. and M.A. Apps. 2006. Climate-Disturbance Interactions in Boreal Forest Ecosystems. Foreword and peer-reviewed papers selected from the IBFRA Conference, Fairbanks, Alaska, 3 – 6 May 2004. *Mitigation and Adaptation Strategies for Global Change* 11:765-931.

- McGuire, A.D., Chapin III, R.S., Wirth, C., Apps, M., Bhatti, J., Callaghan, T., Christiansen, T.R., Clein, J.S., Fukuda, M., Onuchin, A., Shvidenko, A., and Vaganov, E., 2006: Responses of high latitude ecosystems to global change: Potential consequences for the climate system. Chapter 24 in J.G. Canadell, D.E. Pataki, L.F. Pitelka (eds.) *Terrestrial Ecosystems in a Changing World*, Springer Berlin, Heidelberg, New York, pp. 297-310.
- McGuire, A.D., F.S. Chapin III, J.E. Walsh, and C. Wirth. 2006. Integrated regional changes in arctic climate feedbacks: Implications for the global climate system. *Annual Review of Environment and Resources* 31:61-91.
- McRae, D.J., S.G. Conard, G.A. Ivanova, A.I. Sukhinin, W.M. Hao, K.P. Koutzenogij, S.P. Baker, V.A. Ivanov, Y.N. Samsonov, T.V. Churkina, A.V. Ivanov, and T.W. Blake, 2006: Fire regimes, variability in fire behaviour, and fire effects on combustion and chemical and carbon emissions in Scotch pine forests of central Siberia. *Mitigation and Adaptation Strategies for Global Change*, 11, 45-76.
- Merekalova A.A., 2006: *Temporal Dynamics and Spatial Variability of Active Layer Thickness in Northern Yakutian Landscapes*. Masters Thesis, Moscow State University, Department of Geography.
- Merekalova A.A., D.G. Fyodorov-Davydov, S.P. Davydov, V.E. Ostroumov., 2006: Phenomenon of the increase in active-layer thickness in Northeastern Yakutia landscapes. *Proceedings of the International Conference Earth Cryosphere Assessment: Theory, Applications and Prognosis of Alterations*, p. 86-89.
- Moskalenko N.G. (ed.), 2006: *Anthropogenic Changes of Ecosystems in the West Siberian Gas Province*. Moscow, RASN- press, 356 pp. (in Russian).
- Negley, T.L., and K.N. Eshleman, 2006: Comparison of stormflow responses of surface-mined and forested watersheds in the Appalachians Mountains, USA. *Hydrological Processes* 20, 3467-3483.
- NRC (National Research Council). 2006: *Toward an Integrated Arctic Observing Network*. Washington DC: The National Academies Press, 115 pp.
- Onuchin, A., Balzter, H., Borisova, H. and Blyth, E. (2006): Climatic and Geographic Patterns of river-runoff formation in Northern Eurasia, *Advances in Water Resources*, 29, No.9, 1314-1327, doi: 10.1016/j.advwatres.2005.10.006.
- Panin G.N. 2006: Caspian Sea level fluctuations as consequence of regional climatic change in the book *GLOBAL CHANGE: Enough Water for all?* Eds. J. Lozán, H. Graßl, P. Hupfer, L. Menzel & Chr. Schönwiese, 216-219.
- Panin G.N., A. E. Nasonov, Th. Foken, H. Lohse, 2006: On the parametrisation of evaporation and sensible heat exchange for a shallow lakes, *Theor. Appl. Climat.*, 85, No. 3-4, 123-129.
- Panin, G.N. 2006: Lake evaporation and heat exchange with the atmosphere with accounting of the processes in the coastal zone. In: *Extreme hydrological events in the Aral-Caspian region*, Moscow, 67-72 (in Russian).
- Panin, G.N. and Dzyuba, A.V., 2006: Changes in wind direction and speed from the Arctic up to the Caspian Sea as a manifestation of contemporary climatic changes. *Water Resources*, 33, No.6, 1-17 (in Russian, in English to follow).
- Panin, G.N., Nasonov, A.E., and T. Foken, 2006: Lake evaporation and heat exchange with the atmosphere in the presence of extensive low depth areas, *Atmosphere and Ocean Physics* (Izvestia of Russian Acad. Sci., Seria Physics of Atmosphere and Ocean) 42, No. 3, 367-383 (in Russian, in English to follow).
- Parfenova EI and Tchebakova NM., 2006: Representation of a climatic and climatopic diversity using GIS technologies: an analysis of its impacts on biodiversity at different levels of vegetation organization. In: *Biological diversity and ecosystem dynamics*,. Novosibirsk: Nauka. 536-547.
- Pipko, I.I., I.P. Semiletov, and S.P. Pugach, 2006: On the exchange in the atmosphere-ocean system in the Chukchi Sea, *Transactions of Russian Academy of Sciences*, 410 (5), 679-683.
- Ponomarev E.I., Ivanov V.A., Byčkov V.A. 2006: Wielkie pożary w lasach Wschodniej Syberii i ich wpływ na proces tworzenia się lokalnych chmur burzowych (Large-area forest fires in the Eastern Siberia and their influence on process of local storm cloud formation). *Leśne Prace Badawcze* (Poland), 2006, #4. 19 – 28
- Ponomarev E.I., Ivanov V.A., Korshunov N.A., 2006: Forecasting of Fire Danger Estimation using ATOVS and Lightning Distribution Data. *Journal of Geography and Natural Recourses*, 2006, №1, 147 – 150.
- Ponomarev, E.I., A.I. Sukhinin, D.J. McRae, 2006: Daily wildland fire danger mapping using satellite data in Siberia. *Forest Ecology and Management*, 234S S73, DOI: 10.1016/j.foreco.2006.08.105
- Popova, V.V. and A.B. Shmakin, 2006: Circulation mechanisms of large-scale anomalies of winter temperature in Northern Eurasia in the end of the 20th century. *Russian Meteorol. and Hydrol.* No. 12, (in Russian, in English to follow).

- Popova, V.V., 2006: Structure of long-term changes in snow accumulation over Northern Eurasia, their relationship with large-scale atmospheric circulation and the evidence in runoff variations. In: "Glaciations of northern and central Eurasia now, in the recent past, and in the future". Moscow, Nauka (in press, in Russian)
- Ranta, H., Kubin, E., Siljamo, P., Sofiev, M., Linkosalo, T., Oksanen, A., Bondestam, K. 2006: Long distance pollen transport cause problems for determining the timing of birch pollen season in Fennoscandia by using phenological observations. *Grana*, 45, 297-304.
- Rawlins, M. A., C. J. Willmott, A. Shiklomanov, E. Linder, S. Frolking, R.B. Lammers, and C. J. Vorosmarty, 2006: Evaluation of trends in derived snowfall and rainfall across Eurasia and linkages with discharge to the Arctic Ocean, *Geophys. Res. Lett.*, 33, L07403, doi:10.1029/2005GL025231.
- Richter-Menge, J., J. Overland, A. Proshutinsky, V. Romanovsky, J.C. Gascard, M. Karcher, J. Maslanik, D. Perovich, A. Shiklomanov and D. Walker, 2006: Arctic Report, pp. S46-S52. In K.A. Shein (ed.), *State of the Climate in 2005*, NOAA/NESDIS/NCDC & American Meteorological Society Report, *Bull. Amer. Meteorol. Soc.*, 2006.
- Richter-Menge, J., J.Overland, A. Proshutinsky, V. Romanovsky, L. Bengtsson, L. Brigham, M. Dyurgerov, J.C. Gascard, S. Gerland, R. Graversen, C. Haas, M. Karcher, P. Kuhry, J. Maslanik, H. Melling, W. Maslowski, J. Morison, D. Perovich, R. Przybylak, V. Rachold, I. Rigor, A. Shiklomanov, J. Stroeve, R. Volker, D. Walker and J. Walsh, 2006: *State of the Arctic Report*, NOAA OAR Special Report, NOAA/OAR/PMEL, Seattle, WA, 36 pp..
- Rodin, S.A., Filipchuk, A.N., Saveliev, O.A., Arkhipov, V.I., Belousov, N.D., Girjaev, M.D., Kazakov, V.I., Kovalev, A.P., Kovalev, N.A., Kozhukhov, N.I., Kuzmichev, E.P., Kurnosov, G.A., Martinjuk, A.A., Obidennikov, V.I., Orlova, O.L., Petrov, V.N., Pisarenko, A.I., Sanaev, V.G., Sedykh, V.N., Selikhovkin, A.P., Solonzev, O.N., Sungurov, R.V., Sukhikh, V.I., Kharin, O.A., Chmyr A.F., Shalaev, V.S., Shapochkin, M.S., Shvidenko, A.Z. (eds.). *Forest Encyclopedia*, Vol. I, 425 pp., Vol. II, 426 pp., Moscow [in Russian]
- Romanovsky, V. E., 2006: Thermal state of permafrost in Alaska during the last 20 years. In Proceedings of the International Conference: *Earth Cryosphere Assessment: Theory, Applications and Prognosis of Alternations*, 1, pp. 96-101.
- Romanovsky, V., Smith, S., Brown, J., Humlum, O. and S. Marchenko, 2006: The Thermal State of Permafrost: A Contribution to the International Polar Year. *Geophysical Research Abstracts*, Vol. 8, 05319, 2006. SRef-ID: 1607-7962/gra/EGU06-A-05319.
- Romanovsky, V., Smith, S., Brown, J., Humlum, O. and S. Marchenko. 2006: The Thermal State of Permafrost: A Contribution to the International Polar Year. *Geophysical Research Abstracts*, Vol. 8, 05319, 2006. SRef-ID: 1607-7962/gra/EGU06-A-05319.
- Sergienko, V.I. and I.P. Semiletov (eds.), 2006: *FEBRAS marine investigations in the Arctic*. Proceedings of the Arctic Regional Center, 4, 214 pp., Vladivostok: Dalnauka, (in Russian).
- Shakhramanian M.A., Sukhinin A.I., Silkin A.V., Miskiv S.I., and Ivanov V.V. 2006. Multi-functional program for acquisition and processing of satellite data. SPACE-M2 Certificate of ROS Patent No. 2005612058.
- Shiklomanov A. I., T. I. Yakovleva , R. B. Lammers, I. Ph. Karasev, C. J. Vörösmarty, E. Linder, 2006: Cold Region River Discharge Uncertainty - Estimates from Large Russian Rivers. *J. Hydrology*, 326, 231–256.
- Shiklomanov, A.I., R. Lammers, and C.J. Vörösmarty, 2006: Error characteristics in measurements of discharge in major Arctic river systems. *J. Hydrology*, in press.
- Shiklomanov, N.I., and Nelson, F.E., 2006: Active-layer processes. In: Elias, S. (ed.), *Encyclopaedia of Quaternary Sciences*. Amsterdam: Elsevier Scientific Publishers, pp. 2138-2147
- Shimel, J. P., Fahnestock, J., Michaelson, G. J., Mican, C., Ping, C., Romanovsky, V. E. and J. Welker, 2006: A microbial activity based model of winter CO₂ fluxes in Arctic tundra communities, *Arctic, Antarctic, and Alpine Research*, 38, 249-256.
- Shkolnik, I.M., V.P. Meleshko, and V.M. Kattsov, 2006: Possible climatic changes over the European part of Russia and adjacent territories to the end of 21st century: projections made using the regional model of the Main Geophysical Observatory (MGO). *Meteor. Hidrologia (Russian Meteorology and Hydrology)*, 2006, No. 3, 5-16.
- Shvidenko, A., 2006: Russia. In: *Our Earth's Changing Land*. An Encyclopedia of Land-Use and Land-Cover Change edited by H. Geist. Greenwood Press, Westport, Connecticut & London. Volume 2, pp. 515-520.
- Shvidenko, A., and I. McCallum, 2006: Systems analysis: Helping to understand a changing world. *Options*, Winter 2006, pp. 20-21
- Shvidenko, A., Apps, M.J., 2006: The International Boreal Forest Research Association: Understanding boreal forests and forestry in a

- changing word. *Mitigation and Adaptation Strategies for Global Change*, 11, 5-32.
- Shvidenko, A., Shepaschenko, D., Nilsson, S., and Buluy, Yu. 2006: *Tables and Models of Growth and Productivity of Forests of Major Forest Forming Species of Northern Eurasia (Standard and Reference Materials)*. Federal Forest Service of the Russian Federation and IIASA, Moscow, 803 pp. (in press) [in Russian]
- Shvidenko, A., Shepashenko, D., Nilsson, S., and Bouloui, Yu., 2006: Semi-empirical models for assessing biological productivity of Northern Eurasia forests. *Ecological Modeling* (in press).
- Siljamo, P., Sofiev, M., Ranta, H., 2006: An approach to simulation of long-range atmospheric transport of natural allergens: an example of birch pollen. *In Air Pollution Modelling and its Applications XVII* (in press)
- Sofiev M, P. Siljamo, I. Valkama, M. Ilvonen and J. Kukkonen, 2006: A dispersion modelling system SILAM and its evaluation against ETEX data. *Atmos. Environ.* 40, 674–685.
- Sofiev, M., Jourden, E., Kangas, L., Karvosenoja, N., Karppinen, A. and Kukkonen, J., 2006: Numerical Modelling of Spatial Distribution of Fine Particulate Matter in Europe and Finland. In: Vehkamäki, H. et al. (eds.): *Report Series in Aerosol Science*, No 83, NOSA 2006 Aerosol Symposium, combined with the X Finnish National Aerosol Symposium, Finnish-Czech Aerosol Symposium and BACCI workshop, Helsinki 8.-10.11.2006, pp. 348-352, University Press, Helsinki.
- Sofiev, M., Jourden, E., Kangas, L., Karvosenoja, N., Karppinen, A., Kukkonen, J., 2006: Numerical modelling of the spatial distribution of fine particulate matter in Europe and Finland. *Report Series in Aerosol Science, Finnish Association for Aerosol Research*, 83, 348-353.
- Sofiev, M., Siljamo, P., Ranta, H., Rantio-Lehtimäki, A., 2006: Towards numerical forecasting of long-range air transport of birch pollen: theoretical considerations and a feasibility study. *International J. on Biometeorology*, DOI 10 1007/s00484-006-0027-x, 50, 392-402.
- Soja A.J., H.H. Shugart, A.I. Sukhinin, S.G. Conard, and P.W. Stackhouse Jr., 2006: Satellite-based mean fire return intervals as indicators of change in boreal Siberia (1995 – 2002). *Mitigation and Adaptation Strategies for Global Change*, 11, 75-96.
- Solomina, O.N., Shweingruber, F., Nagornov, O.V., Kuzmichenok, V.A., Yurina Yu.O., Mihalenko, V.N., Kunahovich, M.G. and Kutuzov, S.S., 2006: Reconstruction of summer temperature in the Central Tyan Shan Mountains using fir-tree rings density characteristics during the 1626-1995 period and its relationship with glaciological characteristics. *Materials of Glaciological Studies*, 100, 104-113 (in Russian).
- Speranskaya, N.A. and Tsytsenko, K.V. 2006. Total evaporation over the Don River Basin and its variability. *Russian Meteorol. Hydrol.* (in press)
- Stendel, M., V.E. Romanovsky, J.H. Christensen, and T.S. Sazonova, 2006: Using dynamical downscaling to close the gap between the global change scenarios and local permafrost dynamics. In *Proceedings of the International Conference: Earth Cryosphere Assessment: Theory, Applications and Prognosis of Alternations*, 1, 104-107..
- Stokes, C.R., S.D. Gurney, M. Shahgedanova, and V.V. Popovnin, 2006: Late-20th-century changes in glacier extent in the Caucasus Mountains, Russia/Georgia, *Journal of Glaciology*, 52 (176): 99-109.
- Surazakov, A.B. and V.B. Aizen, 2006: Estimating Volume Change of Mountain Glaciers Using SRTM and Topographic Data. *J. Transactions of Geoscience on Remote Sensing*, 44, No.10, 2991-2995.
- Tchebakova MN, Rehfeldt GE and Parfenova EI., 2006: Impacts of climate change on the distribution of *Larix spp.* and *Pinus sylv.* and their climatypes in Siberia. *Mitigation and Adaptation Strategies for Global Change*, 2006, 11 (4): 861-882
- Tchebakova NM and Parfenova EI., 2006: Climate and vegetation changes in southern Siberian mountains in the 20th century. In: *Global change in mountain regions*. Ed. Martin F. Price. Sapiens Publishing, Duncow, Kirkmahoe, Dumfriesshire, UK. 181-182.
- Tchebakova NM and Parfenova EI., 2006: Predictions of forest boundaries shifts in a changing climate in Siberia by the end of the 20th century. *Computational technologies, 2006, v. 11, p.3, 77-86.*
- Tian HQ, Wang SQ, Liu JY, et al. 2006: Patterns of soil nitrogen storage in China, *Global Biogeochemical Cycles* 20 (1): Art. No. GB1001 Jan. 5, 2006
- Titkova, T.B. and Kononova, N.K., 2006: Relationship between snow accumulation and general atmospheric circulation. *Izvestia of the Russian Acad. Sci., Seria Geograph.*, 2006, No. 1, 35-46 (in Russian, in English to follow).
- Turkov D. V., 2006: Snow cover anomalies: Their causes and role in the climatic system (from the GCM experiments). In: "Glaciations of northern and central Eurasia now, in the recent past, and in the future". Moscow, Nauka (in press, in Russian).

- Valendik E.N., Sukhinin A.I., Kosov I.V. , 2006: Monograph "Stability of Coniferous Forest to Wildfires Thermal Influence" , Krasnoyarsk, 96 p.(in Russian)
- Vaschuk, L.N. and Shvidenko, A.Z. 2006. *Dynamics of Forests of Irkutsk Region*. Federal Forest Agency of Russia, Irkutsk, 392 pp. [in Russian]. [There is a review of this book – A.S. Sheinguz and D.F.Efremov "What happens with forest resources of Asian Russia? Review of the book by L.N. Vaschuk and A.Z. Shvidenko "Dynamics of Forests in Irkutsk Region", "Spatial Economics", №3, 2006, 157-162]
- Vasiliev, A.A., Drozdov, D.S., Korostelev, Ju.V.et al., 2006: Cryolithozone and Natural Processes in coastal – shelf area of the Eurasian Polar Seas. In *Earth Cryosphere Assessment: Theory, Applications and Prognosis of Alterations, Proceedings of the International Conference*, Tyumen, May 29-31, vol. 1, p. 19-25.
- Vasiliev, A.A., Simonov, S.A., Streletskiy, D.A., 2006: Permafrost Response to Climate Changes (Western Yamal Exanple). In *Earth Cryosphere Assessment: Theory, Applications and Prognosis of Alterations, Proceedings of the International Conference*, Tyumen, May 29-31, vol.1, p. 62-65.
- Vicente Serrano S., N. Delbart, T. Le Toan, 2006: El Nino-Southern Oscillation influences on the variability of the leaf Appearance dates in Central Siberia , *Geophys. Res. Lett.*, 33, L03707, 2006.
- Vicente-Serrano, M. Grippa, T. Le Toan, N. Mognard 2006: The role of atmospheric circulation with respect to the interannual variability in the date of snow cover disappearance over northern latitudes between 1988 and 2003", *in press, J. Geophys. Res. – Atmospheres*, November 2006.
- Vicente-Serrano, M. Grippa, N. Delbart, T. Le Toan and L. Kergoat, 2006: Seasonal pressure patterns influence on temporal variability of vegetation activity in central Siberia, *Int. J. Climatol.* 26, 303-321.
- Wang, J.Y., P.H. Whitfield, and A.J. Cannon, 2006. Influence of Pacific Climate Patterns on Low-Flows in British Columbia and Yukon, Canada. *Canadian Water Resources Journal* 31,25-40.
- Whitfield, P.H., and M. Hendrata. 2006: Assessing detectability of changes in low flows in future climates from stage discharge measurements. *Canadian Water Resource Journal*, 31, 1-12
- Whitfield, P.H., J. Cathcart, S. Hamilton, J. Heinonen, D. Hutchinson, J.G. Lang, C. Spence, and R. White. 2006. Guest Editorial: Hydrology for the orographically challenged - A commentary from the workshop on predictions in Ungauged Basins (PUB) in mountainous regions. *Canadian Water Resources Journal* 31(2):iii-v
- Yue TX, Fan ZM, Liu JY, et al. 2006: Scenarios of major terrestrial ecosystems in China, *Ecological Modelling* 199 (3): 363-376 Sp. Iss. SI Dec. 1, 2006.
- Zhuang, Q., J.M. Melillo, M.C. Sarofim, D.W. Kicklighter, A.D. McGuire, B.S. Felzer, A. Sokolov, R.G. Prinn, P.A. Steudler, and S. Hu, 2006: CO₂ and CH₄ exchanges between land ecosystems and the atmosphere in northern high latitudes over the 21st Century. *Geophys. Res. Lett.*, 33, L17403, doi:10.1029/2006GL026972.
- Zimba, P. V. and A.A. Gitelson, 2006: Remote estimation of chlorophyll concentration in hyper-eutrophic aquatic systems: Model tuning and accuracy optimization, *Aquaculture*, 256, 1-4, June 15, 2006, pp.272-286.

Papers published in 2005

- Ananicheva M.D. and N.K. Kononova, 2005: Therole of atmospheric processes in glaciers' regime in the Northeastern Siberia. *Trans. of the 12th Symp. Russian Geograph. Soc.*, 5, *World Ocean, Land Water Bodies, and Climate*, St.Petersburg, Russia, 302-309 (in Russian).
- Ananicheva M.D., Krenke A.N. Changes of climatic snow line and equilibrium line altitudes in the north-eastern Siberia in XX century. – Ice and climate news. *The WCRP Climate and Cryosphere Newsletter*, November 6, August 2005, 3-6.
- Ananicheva M.D., Krenke A.N., 2005: Evolution of climatic snow line and boundary of glaciers' feeding zone in the Northeastern Siberia in the 20th century. *Materials of Glaciological Studies*, 98, 225-232 (in Russian).
- Ananicheva,M.D., M.M. Koreisha and S. Takahashi, 2005: Assessment of glacier shrinkage from maximum in the LIA in the Suntar-Khayata Range, North-East Siberia – Japanese Society of Snow and Ice. *Bulletin of Glaciological Research* 22 (2005) p.9-17.
- Anisimov, O.A., Lavrov, S.A., Reneva, S.A., 2005.

- Emission of methane from the Russian frozen wetlands under the conditions of the changing climate. In: Y. Izrael (Editor), *Problems of ecological modeling and monitoring of ecosystems*. Hydrometeoizdat, S.Petersburg, pp. 124-142.
- Anisimov, O.A., Lavrov, S.A., Reneva, S.A., 2005. Modelling the emission of greenhouse gases from the Arctic wetlands under the conditions of the global warming. In: G.V. Menzhulin (Editor), *Climatic and environmental changes*. Hydrometeoizdat, S.Petersburg, pp. 21-39.
- Apps, M.A. and A.D. McGuire. 2005: Climate-Disturbance Interactions in Boreal Forest Ecosystems. Foreword and peer-reviewed papers selected from the IBFRA Conference, Fairbanks, Alaska, 3 – 6 May 2004. *Canadian Journal of Forest Research*, 35, 2073-2293.
- Balzer, H., Gerard, F., George, C., Rowland, R., Jupp, T., McCallum, I., Shvidenko, A., Nilsson, S., Sukhinin, A., Onuchin A., and Schmullius, C. 2005: Impact of the Arctic Oscillation pattern on interannual forest fire variability in Central Siberia. *Geophys. Res. Lett.*, 32, L14709, doi: 10.1029/2005GL022526.
- Cao MK, Yu GR, Liu JY, et al. Multi-scale observation and cross-scale mechanistic modeling on terrestrial ecosystem carbon cycle *Science In China Series D-Earth Sciences* 48: 17-32 Suppl. 1 APR 2005
- Chapin, F.S., III, M. Berman, T.V. Callaghan, P. Convey, A.-S. Crepin, K. Danell, H. Ducklow, B. Forbes, G. Kofinas, A.D. McGuire, M. Nuttall, R. Virginia, O. Young, and S. Zimov, 2005: Polar Systems. Pages 717-743 In H. Hassan, R. Scholes, and N. Ash (Eds.) *Ecosystems and Human Well-Being: Current State and Trends*. Island Press, Washington.
- Dall’Olmo, G., and A. A. Gitelson, 2005: Effect of bio-optical parameter variability on the remote estimation of chlorophyll-a concentration in turbid productive waters: experimental results, *Applied Optics*, 44, No. 3, 20 January 2005, 412-422.
- Dall’Olmo, G., Gitelson, A.A., Rundquist, D.C., Leavitt, B., Barrow, T., and Holz, J.C., 2005: Assessing the potential of SeaWiFS and MODIS for estimating chlorophyll concentration in turbid productive waters using red and near-infrared bands, *Remote Sensing of Environment*, 96, 176-187.
- Delbart N., L. Kergoat, T. Le Toan, J. L’Hermitte and G. Picard, 2005, “ Determination of the dates of greening up in Siberian boreal forests using NDWI from SPOT- VEGETATION data”, *Remote Sensing of Environment*, 97, 26-38.
- Dong YS, Qi YC, Liu JY, et al. Variation characteristics of soil respiration fluxes in four types of grassland communities under different precipitation intensity, *Chinese Science Bulletin*, 50 (6): 583-591 MAR 2005
- Duguay, C. R., Zhang, T., David W. Leverington, D. W. and V. E. Romanovsky, 2005: Satellite Remote Sensing of Permafrost and Seasonally Frozen Ground. In: Duguay, C.D. and A. P. (Editors), *Remote Sensing in Northern Hydrology: Measuring Environmental Change*, Geophysical Monograph, 163, ISBN 0-87590-428-9, AGU, 150 pp.
- Fedorov-Davudov D.G, Ostroumov V.E., Davudov S.P., Merecalova A.A., Mergelov N.S., 2005: Active-layer dynamics in the characteristic landscapes of the low Kolyma region. *Proceedings of the International Conference on Priorities in the Earth Cryosphere Research*, Pushchino, Russia, pp 129-131.
- Gao ZQ, Liu JY, Cao MK, et al. Impacts of land-use and climate changes on ecosystem productivity and carbon cycle in the cropping-grazing transitional zone in China, *Science In China Series D-Earth Sciences*, 48 (9): 1479-1491 Sep. 2005
- Gitelson, A.A., A. Viña, D.C. Rundquist, V. Ciganda, T.J. Arkebauer, 2005: Remote Estimation of Canopy Chlorophyll Content in Crops, *Geophys. Res. Lett.*, 32, L08403, doi:10.1029/2005GL022688.
- Grippa M, N. Mognard and T. Le Toan, 2005 “Comparison between the interannual variability of snow parameters derived from SSM/I and the Ob river discharge”, *Remote Sensing of Environment*, 98, 35-44, 2005.
- Grippa M., L. Kergoat, T. Le Toan, N. Mognard, N.Delbart, J. L’Hermitte and S.Vicente-Serrano, 2005: “The impact of snow depth and snow melt on the vegetation variability over Central Siberia”. *Geophys. Res. Lett.*, 32, L21412, 2005.
- Groisman, P. Ya., R.W.Knight, D. R. Easterling & T. R. Karl, G. C. Hegerl, and V.N. Razuvaev, 2005: Trends in intense precipitation in the climate record. *J. Climate*, 18, 1343-1367.
- Grosse G, Schirmmeister L, Kunitsky VV, and Hubberten H-W, 2005: The use of CORONA images in remote sensing of periglacial geomorphology: An illustration from the NE-Siberian coast. *Permafrost and Periglacial Processes*, 16, 163-172. doi:10.1002/ppp.509
- Healey, S.P., W.B. Cohen, Y. Zhiqiang, and O. Krankina, 2005: Comparison of Tasseled Cap-Based Landsat Data Structures for Use in Forest Disturbance Detection. *Remote Sensing of Environment*, 97, 301 – 310.
- Henebry, G.M., K.M. de Beurs, and A.A. Gitelson. 2005: Land surface phenologies of Uzbekistan

- and Turkmenistan between 1982 and 1999. *Arid Ecosystems*, 11(26-27): 25-32.
- Henebry, G.M., Viña, A. and Gitelson, A.A., 2005: The Wide Dynamic Range Vegetation Index and its Potential Utility for Gap Analysis, *Gap Analysis Program Bulletin*, No. 12, 25-27.
- Hinzman, L., Bettez, N., Bolton, W.R., Chapin, F.S., Dyurgerov, M., Fastie, C., Griffith, B. Hollister, R.D., Hope, A., Huntington, H.P., Jensen, A., Jia, G.J., Jorgenson, T., Kane, D.L., Klein, D.R., Kofinas, G., Lynch, A., Lloyd, A., McGuire, A.D., Nelson, F.E., Oechel, W.C. Osterkamp, T., Racine, C., Romanovsky, V. Stone, R., Stow, D., Sturm, M., Tweedie, C.E., Vourlitis, G., Walker, M., Walker, D., Webber, P.J., Welker, J., Winker, J., Yoshikawa, K. (2005). Evidence and implications of recent climate change in northern Alaska and other Arctic regions. *Climatic Change*, 72, 251-298.
- Hinzman, L.D., N.D. Bettez, W.R. Bolton, F.S. Chapin, M.B. Dyurgerov, C.L. Fastie, B. Griffith, R.D. Hollister, A. Hope, H.P. Huntington, A.M. Jensen, G.J. Jia, T. Jorgenson, D.L. Kane, D.R. Klein, G. Kofinas, A.H. Lynch, A.H. Lloyd, A.D. McGuire, F.E. Nelson, M. Nolan, W.C. Oechel, T.E. Osterkamp, C.H. Racine, V.E. Romanovsky, R.S. Stone, D.A. Stow, M. Sturm, C.E. Tweedie, G.L. Vourlitis, M.D. Walker, D.A. Walker, P.J. Webber, J.M. Welker, K.S. Winker, and K. Yoshikawa. 2005: Evidence and implications of recent climate change in northern Alaska and other Arctic regions. *Climatic Change*, 72, 251-298.
- Hu Yunfeng, Liu Jiyuan, Zhuang Dafang, et al, Distribution characteristics of ¹³⁷Cs in wind-eroded soil profile and its use in estimating wind erosion modulus, 2005: *Chinese Science Bulletin*, 50, No. 11, 1155-1159.
- Iossouпов, V.I., A.S. Salomatin, and I.P. Semiletov, 2005: Relationship between backscattering of high-frequency acoustical signal and temperature in the upper sediment layer over the Arctic shelf. *Transactions of Russian Academy of Sciences*, 402 (5), 686-688 (translated into English).
- Kasischke, E. S., N. H. F. French, A. I. Sukhinin, J. H. Hewson, and B. J. Stocks, 2005: Influences of boreal fire emissions on Northern Hemisphere atmospheric carbon and carbon monoxide, *Global Biogeochem. Cycles*, 19, GB1012, doi:10.1029/2004GB002300.
- Kononov, Yu. M., M.D. Ananicheva, and I. Willis (2005): High resolution reconstruction of Polar Ural glaciers mass balance for the last millennium – *Annals of glaciology*, 41, Papers from the International Symposium on Arctic Glaciology, held in Geilo, 23-27, August 2004. IGS, Cambridge, 163-171
- Krankina, O.N., R.A. Houghton, M.E. Harmon, E.H. Hogg, D. Butman, M. Yatskov, M. Huso, R.F. Treyfeld, V.N. Razuvaev, and G. Spycher, 2005: Effects of Climate and Disturbance on Forest Biomass across Russia. *Can. J. For. Res.* 35, 2281-2293.
- Krenke A.N., Ananicheva M.D. 2005: Climate Change and Human Dimension – Investigations in Russia. In: *Human dimension and global environmental changes*, IHDP-Russia, Moscow, 157-173.
- Kuzminykh, Y.V., R.J. Alig, O.N. Krankina, and A.S. Yost, 2005: Social and Economic Aspects of Potential Carbon Flow to Forest Ecosystems (in Russian). *Lesnoy Zhurnal (Forest Journal)* 1-2:130-135.
- Lapenis, A., Shvidenko, A., Shepaschenko, D., Nilsson, S., and Aiyyer, A. 2005. Acclimation of Russian forests to recent changes in climate. *Global Change Biology*, 11, 2090-2102.
- Li LF, Wang JF, Liu JY, Optimal decision-making model of spatial sampling for survey of China's land with remotely sensed data, *Science In China Series D-Earth Sciences*, 48 (6): 752-764, June 2005.
- Liu Jiyuan, Hanqin Tian, Mingliang Liu, et al, China's changing landscape during the 1990s: Large-scale land transformations estimated with satellite data, 2005: *Geophys. Res. Lett.*, 32, L02405, doi: 10.1029/2004GL021649.
- Liu Jiyuan, Jinyan Zhan, Xiangzheng Deng, The Spatio-Temporal Patterns and Driving Forces of Urban Land Expansion in China during the Economic Reform Era, 2005: *AMBIO: A Journal of the Human Environment*, 34, No.6, 450-455.
- Liu Jiyuan, Mingliang Liu, Hanqin Tian, Dafang Zhuang, and Zengxiang Zhang et al., 2005: Spatial and temporal patterns of China's cropland during 1990-2000: An analysis based on Landsat TM data, *Remote Sensing of Environment*, 98, 442-456
- Liu Jiyuan, XU Xinliang, ZHUANG Dafang, GAO Zhiqiang, 2005: Impacts of LUCC processes on potential land productivity in China in the 1990s, *Science in China Series D-Earth*, 48, No. 8 , 1259-1269
- Liu Jiyuan, Yue Tianxiang, Ju Hongbo et al, *Integrated Ecosystem Assessment of Western China*, China Meteorological Press, ISBN 7-5029-3941-5/X.0097, 2005
- Malkova G.V., 2005: Effect of climate change on active-layer thickness at Balvanskii CALM site. *Proceedings of the International Conference on Priorities in the Earth Cryosphere Research*, Pushchino, Russia, pp 122-125
- McRae, D.J., J.-Z. Jin, S.G. Conard, A.I. Sukhinin, G.A. Ivanova, and T.W. Blake, 2005: Infrared

- characterization of fine-scale variability in behavior of boreal forest fires *Canadian Journal of Forestry Research*, 35: 2194–2206 (2005) doi: 10.1139/X05-096 © 2005 NRC
- Merzlyak, M.N., Solovchenko, A.E., Smagin, A.I., and Gitelson A.A. (2005). Apple Flavonoids During Fruit Adaptation to Solar Radiation: Spectral Features and technique for Non-destructive Assessment, *Journal of Plant Physiology*, 162, No. 2, pp. 151-160.
- Moskalenko N.G., 2005: Dynamics of West Siberian bogs. Proceedings to the International Conference on Priorities in the Earth Cryosphere Research, Pushchino, Russia, pp 126-128.
- Panagiotopoulos, F., M. Shahgedanova, D.B. Stephenson, A. Hannachi. (2005) Observed Trends and Teleconnections of the Siberian High, a Recently Declining Centre of Action. *Journal of Climate*, 18, 1411-22.
- Panin G.N., Mamedov R., Mitrofanov I.V., 2005 *Caspian Sea at present conditions*, NAUKA 356pp.
- Panin G.N., Th. Foken, 2005, Air–sea interaction including a shallow and coastal zone, *Journal of Atmospheric and Ocean Science*, V. 10, N. 3, 289 – 305.
- Pavlov A.V., Malkova G.V. ,2005: *Contemporary Climate Change in Russian Permafrost Regions: A series of Small-Scale Maps*. GEO Publishing, Novosibirsk, Russia, 54 pp.
- Pavlov A.V., Malkova G.V., 2005: Estimates of air temperature changes for the Russian Permafrost regions. *Earth Cryosphere*, 8(2), 3-9
- Pavlov A.V., Malkova G.V., 2005: Overview of the permafrost observational networks in Russia. *Earth Cryosphere*, (9) 2, 67-77
- Pavlov A.V., Skachkov Y.B., Kakunov N.B., 2005: Relationship between long-term active-layer changes and atmospheric factors. *Earth Cryosphere*, 8(4), 3-11
- Peregon A. *Peatland-forming processes at the south of Taiga Zone in western Siberia*. PhD thesis in biology (Soil Science).- Novosibirsk, 2005.- 19 c. [in Russian]
- Peregon, A., S. Maksyutov, N. Kosykh, N. Mironycheva-Tokareva, M. Tamura, G. Inoue (2005), Application of the multi-scale remote sensing and GIS to mapping net primary production in West Siberian wetlands, *Phyton* (Austria) Special issue: "APGC 2004", 45, Fasc. 4, 543 – 550.
- Picard G, Quegan S, Delbart N, Lomas MR, Le Toan T, Woodward IF, 2005: Phenology modelling in Siberia and its impact on the carbon budget, *Global Change Biology*, 11,1-13,doi :10.1111.
- Qi YC, Dong YS, Liu JY, et al. Daily variation characteristics of CO₂ emission fluxes and contributions of environmental factors in semiarid grassland of Inner Mongolia, China, *Science In China Series D-Earth Sciences*, 48 (7): 1052-1064 Jul. 2005.
- Rawlins, M.A., K.C. McDonald, S. Frolking, R.B. Lammers, M. Fahnestock, J.S. Kimball, and C.J. Vörösmarty, 2005: Remote sensing of snow thaw at the pan-Arctic scale using the SeaWinds Scatterometer. *J. Hydrology*, 312, 294-311.
- Sergueev, D. O., Tipenko, G. S., Romanovskii, N. N, Romanovsky, V. E, and S. L. Berezovskaya, 2005: Impact of Mountain Topography and Altitudinal Zonality on Alpine Permafrost Evolution and Ground Water Hydrology in the Southern Part of the Lena River Watershed (in Russian), *Earth Cryosphere*, 9, no.2, pp. 33-42.
- Semechkin, I.V., Shvidenko, A.Z., and Shepaschenko, D.G. 2005: General tables of growth and biological productivity of fully stocked forests of Stone pine (*Pinus sibirica*). *Forest Inventory and Planning*, №1 (35), pp. 7-27 [in Russian].
- Semiletov, I., O. Dudarev, V. Luchin, K.-H. Shin, and N. Tanaka, 2005: The East-Siberian Sea as a transition zone between Pacific-derived waters and Arctic shelf waters, *Geophys. Res. Lett.*, 32, L10614/2005GL022490.
- Shahgedanova, M. and Lamakin, M. (2005) Trends in Aerosol Optical Depth in the Russian Arctic and Their Links with Synoptic Climatology. *Science of the Total Environment*, 341(1-3): 133-48.
- Shahgedanova, M., C.R. Stokes, S.D. Gurney, and V.V. Popovnin (2005) Interactions Between Mass Balance, Atmospheric Circulation and Recent Climate Change on the Djankuat Glacier, Caucasus Mountains, Russia. *J. Geophys. Res. – Atmosphere*, 110 (D4), D04108, doi: 10.1029/2004JD005213.
- Shakhova, N., I. Semiletov, and G. Panteleev, 2005: The distribution of methane on the Siberian Arctic shelves: Implications for the marine methane cycle, *Geophys. Res. Lett.*, 32, L09601, doi:1029/2005GL022751.
- Shakhova, N.E., I.P. Semiletov, and N. Bel'cheva, 2005: Methane in the Eastern Arctic seas. *Transactions of Russian Academy of Sciences*, 402 (4), 529-533 (translated into English).
- Shepaschenko, G.G., Shvidenko, A.Z., and Lakyda, P.I. 2005. Database on structure of live biomass of Russian forests. *Forest Journal*, No 4, pp. 80-86 [in Russian].
- Shvidenko A. (contributing author). 2005. Millennium Ecosystem Assessment. *Ecosystems and Human Well-Being. Synthesis*. Island Press, Washington, DC, 137 pp.

- Shvidenko, A., Barber, C.V., Persson, R., Gonzalez, P., Hassan, R., Lakyda, P., McCallum, I., Nilsson, S., Pulhin, J., Rosenberg, B., and Sholes, B. 2005. Forest and woodlands systems. Chapter 21 in the 3rd Millennium Ecosystem Assessments. *Ecosystems and Human Well-being: Conditions and Trends*, pp. 583-617.
- Sturm, M., Schimel, J., Michelson, G., Welker, J., Oberbauer, S. F., Liston, G. E., Fahnestock, J., and V. E. Romanovsky, 2005: Are winter biological processes important in converting arctic tundra to shrubland?, *BioScience*, 55, No.1, 17–26.
- Tchebakova N.M., Rehfeldt G.E., and Parfenova E.I. 2005: Impacts of climate change on the distribution of *Larix spp.* and *Pinus sylvestris* and their climatypes in Siberia. *Mitigation and Adaptation Strategies for Global Change* (2005) 11:861-882.
- Tian GJ, Liu JY, Xie YC, et al. Analysis of spatio-temporal dynamic pattern and driving forces of urban land in China in 1990s using TM images and GIS, *CITIES* 22 (6): 400-410 Dec. 2005
- Tian Xiang Yue, Ying An Wang, Ji Yuan Liu, et al., 2005: Surface modelling of human population distribution in China, *Ecological Modelling*, 181(4), 461-478
- Verma, S.B., Dobermann, A., Cassman, K.G., Walters, D.T., Johannes M. Knops, J.M., Arkebauer, T.J., Suyker, A.E., Burba, G.G., Amos, B., Yang, H., Ginting, D., Hubbard K.G., Gitelson, A.A., Walter-Shea, E.A., 2005: Annual carbon dioxide exchange in irrigated and rainfed maize-based agroecosystems. *Agricultural and Forest Meteorology*, 131, 77-96.
- Viña, A and A.A. Gitelson, 2005: New developments in the remote estimation of the fraction of absorbed photosynthetically active radiation in crops, *Geophys. Res. Lett.*, 32, L17403, doi:10.1029/2005GL023647.
- Walsh, J., Anisimov, O., Hagen, J.O., Jakobsson, T., Oerlemans, J., Prowse, T., Romanovsky, V., Savelieva, N., Serreze, M., Shiklomanov, A., Shiklomanov, I. and Solomon, S. 2005: The Cryosphere and Hydrologic Variability. Chapter 5 in *Arctic Climate Impact Assessment (ACIA)*, Cambridge University Press, London, 181-242.
- Zhang C, Tian HQ, Liu JY, et al., 2005: Pools and distributions of soil phosphorus in China, *Global Biogeochemical Cycles* 19 (1): Art. No. GB1020 Mar. 16, 2005.

Important NEESPI-related papers published prior to 2005

- Bergen, K., S. G. Conard, R. A. Houghton, E. S. Kasischke, S. Kharuk, O. Krankina, J. Ranson, H. H. Shugart, A. Sukhinin and R. F. Treyfeld. 2003. NASA and Russian scientists observe land-cover/land-use change and carbon in Russian forests. *Journal of Forestry*, June Special Issue on Technologies in Forestry, 34-41.
- Bergen, K. M., E. Vaganov, G. Gutman and C. Justice. 2002. GOF/GOLD Regional Workshop: GOF/GOLD Information Products for Forest and Land Management in Siberia/Far East. *The Earth Observer* 14(6): 19-21.
- Goldammer, J. A., A.I. Sukhinin, I.D. Chiszar, 2004: The Present Wildfire Situation in Russian Federation, Chapter 2. In: Monograph "Fire Management on the Ecoregional Level", World Bank, "Alex", Moscow, 2004, p.26-66.
- Dudarev, O., I. Semiletov, A. Botsul, and A. Charkin, 2003: Modern sedimentation in the coastal cryolitozone of the Dmitry Laptev Strait/East-Siberian Sea, *Pacific Geology*, 22, 1, 51-60 (translated into English).
- Nelson, F.E. (ed)., 2004: Eurasian Contributions to the Circumpolar Active Layer Monitoring (CALM) Workshop. *Polar Geography* 28 (4), 253-340.
- Semiletov, I., A. Makshtas, S.-I. Akasofu, and E.L. Andreas, 2004, Atmospheric CO₂ balance: the role of Arctic sea ice, *Geophys. Res. Lett.*, 31, L05121, doi: 10.1029/2003GL017996.
- Semiletov, I., N. Shakhova, and V. Romanovsky, 2004, Methane Climate Forcing and Methane Observations in the Siberian Arctic Land-Shelf System, *World Resource Review*, 16 (4), 503-541.
- Guo, L., I. Semiletov, O. Gustafsson, J. Ingri, P. Anderson, O. Dudarev, and D. White, 2004: Characterization of Siberian Arctic coastal sediments: Implications for terrestrial carbon

export. *Global Biogeochemical Cycles*, 18, GB 1036, doi: 10.1029/2003.GB.02087.
Savelieva, N.I., I.P. Semiletov, G.E. Weller, L.N. Vasilevskaya, and V.I. Yusupov, 2004: Climate

change in northern Asia in the second half of the 20th century, *Pacific Oceanography*, 2 (1-2), 74-84.

Some Conference papers

- Allamano, P., D. Hutchinson, and Whitfield, P.H. 2006. Preliminary Indications of the transferability of IHACRES model parameters in mountainous rainfall driven rivers. In: Proceedings of iEMS 2006. 4pp.
- Breiling M., Shmakin A., Sokratov S., Rubinstein K., Kostka Z., Petrov M., Phillips M. EU INTAS project: Snow and landscape. Influence of snow vertical structure on hydrothermal regime and snow-related economical aspects in Northern Eurasia. 1st NEESPI Science Team Meeting. IIASA, Laxenburg, Austria, February 22-24, 2006. Poster presentations. http://neespi.org/web-content/meetings/IIASA/Posters/33_Meinhard_Breiling_intas2006light.pdf
- Buriak L.V., Ponomarev E.I., Kalenskaya O.P. et. al. 2006: Monitoring of Particularly Protected Territory (National Shushensky Pine Forest) using Remote Sensing and Forest Inventory Data Base. Proceeding of All Russian conference "New Information Technologies in Complex Structures Investigation", Tomsk State University Bulletin -№ 18. -p. 156-161 (in Russian).
- Georgiadi A.G., Milyukova I.P., Kashutina E.A. 2008: Sensitivity of river runoff in Eastern Siberia to recent and projected global climate warming. Proc. of the First International Symposium on the Arctic Research (ISAR-1), November 4-6, 2008, Tokyo, Japan, 100-103
- Holko L., M. Breiling, V. Golubev, V. Khan, Z. Kostka, M. Petrov, M. Petrushina, M. Phillips, V. Popova, K. Rubinstein, A. Shmakin, S. Sokratov, M. Zoloeva. Multiscale and multidisciplinary aspects of snow cover. 14th International Poster Day «Transport of Water, Chemicals and Energy in the System Soil-Crop Canopy-Atmosphere», Bratislava, 9.11.2006, Proceedings CD, ISBN 80-85754-15-0, pp. 174-177.
- Holko L., Kostka Z., Khan V., Shmakin A. Snow depth and snow water equivalent maps for the European part of Russia. "Transport of Water, Chemicals and Energy in the Soil-Plant-Atmosphere System. 16th International Poster Day, Bratislava, 13.11.2008, Proceedings". ISBN 978-80-89139-16-3, pp. 198-204.
- Holko L., Rubinstein K., Shmakin A., Kostka Z. Simulation of snow cover characteristics in atmospheric general circulation models and evaluation of simple schemes for simulation of snow water equivalent. "Transport of Water, Chemicals and Energy in the Soil-Plant-Atmosphere System. 16th International Poster Day, Bratislava, 13.11.2008, Proceedings". ISBN 978-80-89139-16-3, pp. 205-212.
- Hutchinson, D., P.H. Whitfield, and P. Allamano. 2006. Transferability of conceptual model parameters in mountainous rainfall-driven catchments. CWRA Conference October 2006.
- Kosykh N., Mironysheva-Tokareva N., Peregon A., Parshina E. Contribution of NPP to the carbon pool in wetlands: subject to its spatial structure (Samotlor wetland complex, Middle Taiga, western Siberia). International Conference: Ecology and biology of soils (Proceedings), Rostov-na-Donu, 21-22 April, 2005, p. 228-232. [in Russian]
- Malkova, G.V, 2007: Analysis of long-term permafrost monitoring at Balvanskiy permafrost station. In *Cryogenic Resources of Polar Regions, Proceedings of the International Conference*, Salekhard, 2007.
- Maynard, N.G., V.A. Yurchak, Y.A. Slepsov, J.M. Turi, and S. Mathiesen, 2005: Space Technologies for Enhancing the Resilience and Sustainability of Indigenous Reindeer Husbandry in the Russian Arctic. Proceeding of the 31st International Symposium on Remote Sensing of Environment, Global Monitoring for Sustainability and Security, 5 pp., June 20-24, 2005. St. Petersburg, Russia.
- Nazimova D.I., Drobushkevskaya O.V., Ponomarev E.I. 2006: Natural-Resources Potential Estimation of Mountain Forests Using Remote Sensing Data. All Russian Conference "Natural-Resources Potential Estimation of Selenga River Basin Forests" Buriatya, Ulan-Ude, p.167-172.
- Panin G.N., A. E. Nasonov, Th. Foken, H. Lohse, 2005, Evaporation and sensible heat exchange for a shallow lake, <http://ams.confex.com/ams/pdfpapers/78343.pdf>

- Peregon A. Dynamics of wetland expansion processes on the southern limit of Great Vasyugan bog. Proceedings of the IV Siberian Workshop on Climate-ecological monitoring.- Ed. M.V. Kabanov,- Tomsk, 2005, p. 304-308. [in Russian]
- Popova V. Winter snow accumulation and river runoff variations in the North Eurasia from the view point of recent atmospheric circulation changes. Climate and Cryosphere 2005. 1st CliC International Science Conference, 11-15 April 2005, Beijing, China. Book of abstracts, CliC International Project Office and China Meteorological Administration, p. 215
- Popova V.V. Interannual variability of winter snow accumulation and runoff in four river basins of Northern Eurasia. 14th International Poster Day «Transport of Water, Chemicals and Energy in the System Soil-Crop Canopy-Atmosphere», Bratislava, 9.11.2006, Proceedings CD, ISBN 80-85754-15-0, pp. 377-381.
- Popova V.V. Variations of snow accumulation and annual river runoff in North Eurasia and their relation to the atmospheric circulation changes in 20-th century. 5th Annual Meeting of the European Meteorological Society (EMS), Utrecht, Netherlands, 12 - 16 September 2005. Section CL1 – Climate change. EMS Annual Meeting Abstracts, Volume 2, 2005, Abstracts, EMS05-00091
- Popova V.V., Shmakin A.B. Climate factors of permafrost regime and their change in Northern Eurasia during recent decades. Asian conference on permafrost, Lanzhou, China, August 7-9, 2006. Abstracts, p. 202.
- Rubinstein K.G., Khan V.M., Gromov S.S., Shmakin A.B. Simulation of extreme snow events over Eurasia in GCM experiments. International Symposium on extreme weather and climate events, their dynamics and predictions. CAS-TWAS-WMO Forum, October 12-16, 2004, Beijing, China. Program and abstracts, pp.134-140.
- Shakhranian M.A., Sukhinin A.I., Silkin A.V., Miskiv S.I., Ivanov V.V., 2006: Multifunctional Program for Acquisition and Processing of Seattelite Data "SPACE-M2" Certificate of ROSPATENT № 2005612058, August 12,2006.
- Shmakin A.B., Sokratov S.A. Parameterization of snow vertical structure and representation of the corresponding snow properties in climate modeling. Climate and Cryosphere 2005. 1st CliC International Science Conference, 11-15 April 2005, Beijing, China. Book of abstracts, CliC International Project Office and China Meteorological Administration, p. 241.
- Shmakin A.B., Vasiliev A.A. Evaluation of permafrost seasonal variations at several Asian sites in 21st century. Asian conference on permafrost, Lanzhou, China, August 7-9, 2006. Abstracts, p. 114.
- Shmakin, A.B., Sokratov, S.A., Golubev, V.N., Petrov, M.A. Evaluation of snow properties for use in climate modeling applications. Geophysical Research Abstracts, Vol. 8, 04636, 2006, SRef-ID:1607-7962/gra/EGU06-A-04636.
- Shmakin A.B., Popova V.V., Vasiliev A.A. Interannual variations of permafrost characteristics with changing climate. International conference "Cryogenic resources of polar regions", Salekhard, 2007, Proceedings, pp. 192-194, Puschino (in Russian).
- Shmakin, A.B., Sokratov, S.A., Golubev, V.N., Petrov, M.A. Modeling of seasonal snow evolution taking into account its crystal types and vertical structure. 14th International Poster Day «Transport of Water, Chemicals and Energy in the System Soil-Crop Canopy-Atmosphere», Bratislava, 9.11.2006, Proceedings CD, ISBN 80-85754-15-0, pp. 408-415.
- Sukhinin A.I., Buriak L.V., Ponomarev E.I., 2006: GIS and Remote Sensing Data for Monitoring of Forest Disturbances in Angara Region (2006) //Proceeding of All Russian conference "New Information Technologies in Complex Structures Investigation", Tomsk State University Bulletin -№ 18. –p. 179-185 (in Russian).
- Sukhinin A.I., McRae D.J., Ponomarev E.I. 2006: GIS of Wildfire Danger Evaluation and Forecasting Using Remote Sensing Data. Proceeding of International Congress "GEO-Siberia_2006", Novosibirsk, p.126-134.
- Whitfield, P.H., R.J. Hebda, J.K. Jeglum, and S. Howie. 2006. Restoring the Natural Hydrology of Burns Bog, Delta, British Columbia - The Key to the Bog's Ecological Recovery. Conference October 2006.
- Yurchak, B.S., and N.G. Maynard, 2005: Time-Series SAR Observations of Chukotka Sub-Arctic Lakes and Forest-Tundra Fire Scars? Proceeding of the 31st International Symposium on Remote Sensing of Environment, Global Monitoring for Sustainability and Security, 4 pp., June 20-24, 2005. St. Petersburg, Russia
- Попова В.В. Изучение изменений климата высоких широт с точки зрения вариаций крупномасштабной атмосферной циркуляции: предварительные результаты и перспективы. - Совещание по подготовке Международного полярного года 2007-2008, 16-21 октября 2005. Тезисы докладов, стр.6-8.

Шмакин А.Б., Попова В.В., Турков Д.В.
Взаимосвязь параметров климата и снежного
покрова в высокоширотных регионах Евразии.

- Совещание по подготовке Международного
полярного года 2007-2008, 16-21 октября 2005.
Тезисы докладов, стр.3.